UNITED NATIONS

ECONOMIC AND SOCIAL COUNCIL

LIMITED

ST/CEPAL/Conf.54/L.3
17 February 1975

ENGLISH
ORIGINAL: SPANISH

ECONOMIC COMMISSION FOR LATIN AMERICA

SECOND LATIN AMERICAN MEETING ON POPULATION

Jointly sponsored by the Latin American Demographic Centre (CELADE), the Population Division of the United Nations and the United Nations Fund for Population Activities (UNFPA)

Mexico, D.F., 3 to 7 March 1975

DEVELOPMENT AND POPULATION IN LATIN AMERICA: A SUMMARY DIAGNOSIS*

* Document prepared by the secretariat of the Latin American Demographic Centre (CELADE)

75-2-278

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/I. INTRODUCTION

I. INTRODUCTION

On adopting the World Plan of Action at the recent World Population Conference, held at Bucharest, Romania, the governments declared that the basis for an effective solution of population problems was, first and foremost, economic and social change. This assumption, which constitutes the background for the whole Plan, is also incorporated as one of its basic principles and accounts for the socio-economic character of its recommendations.

If the population is to be more effectively integrated in government development plans, an effort should be made to shed some light on two aspects of the question which, though interrelated, are clearly distinguishable. The first is the influence of demographic factors on the development patterns prevailing in a given country, and the restrictions they impose upon the adoption of other different styles. The second relates to the demographic impact of the various countries' overall development strategies and sectoral policies.

Accordingly, in face of the need to clarify these aspects of the problem, the Plan of Action establishes as one of its general objectives: "To advance national and international understanding of the interrelatedness of demographic and socio-economic factors in development; of the nature and scope of the contribution of demographic factors to the attainment of goals of advancing human welfare, on the one hand, and the impact of broader social, economic and cultural factors on demographic behaviour, on the other".

The present document offers a concise summary of the findings of research in demography and other social sciences regarded as germane or relevant to the integration of the population in development plans.

The identification of the relations between population questions and development in terms useful for action purposes entails descending from the abstract plane implicit in reference to an average for Latin America to the concrete situation of specific countries, and, ideally, of regions within each country.

/Unfortunately, the

Unfortunately, the present status of research on the topic precludes so specific a level of analysis. In the present document, therefore, a middle way has been followed. A brief summary of the major population growth and distribution trends in the region as a whole is succeeded by a classification of types of countries according to the specific form taken in them by the trends in question. Subsequently, in a further attempt at specification, using the data available, the relations between population and development in rural and urban areas are separately discussed.

The high rates of natural population growth in many of the countries of the region, and the stepping-up of the urbanization and metropolization processes in all of them, constitute two essential aspects of Latin America's demographic problems. However, exceptions and significant variants are to be found in different countries, as well as in regions within one and the same country.

This demographic plurality seems to reflect the diversity of social contexts co-existing and interacting even within politically unified national societies. An attempt has been made here to illustrate the way in which some of these contexts affect the dynamics of population; but in the future this task will have to be systematically tackled.

The hypothesis which serves as a conductor wire for the integration of the various data presented here is that population trends in the region are linked to the lack of balance characterizing its development, which, in turn, has led to the regional and sectoral heterogeneity and the great inequality in the degrees of well-being of the various classes and strata that many studies single out as the most striking structural features of the Latin American countries.

However, any kind of general discussion of the theoretical and empirical bases of this interpretation of Latin American development, which, moreover, have already been fully canvassed in a number of ECLA documents, has been avoided here. The sole aim in this study has been to investigate the potential of such an interpretation as a means of explaining population phenomena, to which end use has been

/made of

made of the fragmentary information available at present. Only through future research in the field of the interrelationship between development and population will it be possible to show whether it is valid or whether, on the contrary, it must be replaced by another which will lend itself better to the integration of the population in the various governments' development plans.

II. OVERALL POPULATION GROWTH AND DISTRIBUTION TRENDS

A. Growth trends

The total population of twenty Latin American countries (the eighteen Spanish-speaking Republics, plus Brazil and Haiti) was estimated for 1975 at 316,353 million inhabitants.1/ If this figure is compared with estimates for the beginning of the century (about 60 million), or for only twenty-five years ago (157,847 million) it must be concluded that there has been a veritable population explosion in the region as a whole.2/ The result of this speeding-up of the growth rate, approximately as from the 1930s, was that whereas in that period 34 years were needed for the population to increase by 50 million, by 1968 it took only 7 years for the same increase to be achieved.3/

This spectacular growth of the population has its origin in the marked decline in the mortality rate, mainly as a result of the progress made in hygiene and the adoption of easily applicable sanitary measures. At the beginning of the second half of the nineteenth century the expectation of life at birth in Latin America did not exceed 35 years, but it rose slowly during the period until by 1900 it had reached 27.2 years. Although from that time onwards the mortality rate began to fall rapidly in the relatively more developed countries of the region, it is since 1930 that the downward trend has spread to the great majority of the countries of

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1/ CELADE, Latin America: Demographic situation around 1973 and prospects for the year 2000, ST/ECLA/Conf.48/L.5, 25 March 1974, table 1, p.3.

2/ The first estimate is taken from Carmen A. Miró, Aspectos demográficos de América Latina, Latin American Demographic Centre (CELADE), Serie A, Nº 88 (June, 1968); the second from Latin America: Demographic situation around 1973 and prospects for the year 2000, op.cit.

3/ Carmen A. Miró, Ibid.

/the region.

the region.4/ Estimates for the period 1970-1975 place the present expectation of life at 61.47 years.5/

At the same time, calculations bearing on fertility trends have led to the conclusion that gross birth rates remained high during the first half of the twentieth century in the great majority of the countries of the region (the only exceptions having been Argentina, Uruguay, Cuba and Chile), and began to decrease only as from 1960.6/

Since the annual rate of migratory movements did not reach 1 per thousand of the region's population in any five-year period between 1950 and 1975,7/ the rapidity of population growth in Latin America obviously must have been almost entirely due to the dephasing in time and the difference of pace between the decline of the mortality rate and that of the fertility rate.

The downward movement of the mortality rate seems to have slackened its tempo during the 1960s, while at the same time the fertility rate has begun to decrease slowly since that decade. It is consequently predicted that the rate of natural growth is likely to decline from about 28 per thousand - its present level - to some 24 per thousand by the year 2000.8/ Even so, a reduction of the rates on that scale (which constitutes the most probable hypothesis,

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4/ See Eduardo Arriaga, "América Latina: Descenso de la mortalidad por sexo y por edades y su consecuencia en la fecundidad", in Actas, Conferencia Regional Latinoamericana de Población, (Records of Latin American Population Conference), Mexico, 1970, vol. 1, p.60.

5/ Latin America: Demographic situation around 1973 and prospects for the year 2000, op.cit., table 3, p.11.

6/ See Andrew O. Collver, Birth Rates in Latin America: New Estimates of Historical Trends and Fluctuations, Institute of International Studies, Research Series Nº 7, University of California, Berkeley, 1965; Arthur M. Conning, "Latin American Fertility Trends and Influencing Factors", International Union for the Scientific Study of the Population, International Population Conference, Liege, vol. 2, pp. 125-147.

7/ Latin America: Demographic situation around 1973 and prospects for the year 2000, op.cit., p.21

8/ Ibid., table 3, p.27.

/according to

according to the study just quoted) would mean that the population would increase by 93 per cent between now and the year 2000, and would reach 612 million. The same rate would imply that the present population of Latin America would be doubled within the space of thirty years.

The combination of a decline in mortality and a a high and mainly steady fertility rate, which characterized Latin America up to approximately a decade ago, has brought about an age structure in which the proportion of children under 15 years of age is currently about 42.47 per cent, while persons over 65 years of age do not represent more than 3.70 per cent of the population.9/ According to projections prepared by the same source from which the foregoing information was obtained, this population structure is likely to change very slowly between now and the year 2000.

The implications of such a population structure become more clearly apparent when it is considered that the ratio between the number of persons under 15 and over 65 years of age and the number of persons in the 15-65 age group constitutes a dependency index, that is, determines the number of children and old people who are dependent upon the population of working age. Currently the dependency index is 85.78 per cent, having shown an upward trend between 1950 and 1970, and since then a persisent decline which, if the hypothesis of a reasonable decrease in the fertility rate is accepted, should bring it down to a figure of 74.80 per cent by the year 2000.10/

In contrast, the active population (15-64 years of age) has decreased in percentage terms between 1950 and the present time, but if the aggregate population continues to grow in accordance with the fertility trends considered most likely to develop, it will begin to increase gradually but steadily from now until the end of the century (from 53.83 per cent, at which it is currently estimated,

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9/ Ibid., p. 23.

10/ Ibid., p. 24.

/to 57.22

to 57.22 per cent by the year 2000). This will mean that the economy has to adjust itself to meet the greater demand for employment which this expansion will certainly generate.

B. Distribution trends

The proportion of the total population living in nuclei of 20,000 inhabitants and over rose from 26 per cent in 1950 to 33 per cent in 1960, and to 41 per cent in 1970.11/ The annual rate of urbanization, that is, the rate of increase of the proportion of the population living in centres with more than 20,000 inhabitants, climbed from 1.26 per cent in the 1930s to 2.5 per cent in the 1950s slightly decreasing in the 1960s to 2.3 per cent. The number of persons living in urban nuclei increased at an annual rate of 5.2 per cent in the same period.12/

Urbanization in Latin America has been accompanied by a marked tendency towards urban concentration. The towns with over 100,000 inhabitants constituted only 18 per cent of the total number of urban nuclei in 1970, but in them was concentrated 76 per cent of the total urban population;13/ those with 500,000 inhabitants and over contained 56.1 per cent, and those with 1 million inhabitants and over (16 cities) accounted for 45.8 per cent of the region's urban population.

Although the percentage of total urban population in urban nuclei of the three sizes mentioned in the foregoing paragraphs rose during the 1960s, the biggest increases took place in cities of 500,000 inhabitants and over (51 per cent in 1960; 56.1 in 1970).

In 1971 the population density was 14 inhabitants per km2 in the whole region, and 28 inhabitants per km2 in Central America.14/

11/ ECLA, "Population and development in Latin America" (E/CN.12/973) vol. 1, February 1974.

12/ Ibid.

13/ See Appendix, table 6.

14/ United Nations, Demographic Yearbook.

/In contrast,

In contrast, it is estimated that the metropolitan areas of several countries in the region have average densities approaching 20,000 inhabitants per km2.15/ It may therefore be concluded that the Latin American territory is manifestly under-occupied, but that there are great disparities in urban distribution and a striking degree of concentration of the population in a small area.

C. Types of countries by growth trends

A picture of the main population trends identifiable in Latin America as a whole can only be regarded as a first step towards diagnosing the situation, intended rather to define the terms of the problem in relation to other regions of the world than to offer guidelines for action on the part of the Latin American governments.

A way of approximation to the foregoing objective is to identify the various population situations to be found in the countries of the region. At least four situations can be distinguished in the light of fertility and mortality levels and trends (see table 1).

Argentina and Uruguay show low fertility and mortality rates, typical of countries in which the demographic transition process is reaching its culminating point, and decreasing rates of natural growth. Chile and Cuba fall more or less into this first group, with slightly higher fertility rates - although lower than those of the other countries, and still declining - and a mortality and expectation of life similar to those recorded in Argentina and Uruguay.

Another group of countries is formed by Brazil, Colombia, Mexico, Peru, Venezuela, Ecuador, Costa Rica and Panama. They represent the largest contingent as regards the population they comprise. Despite the heterogeneity of the situations involved, these societies show, as common features, a rate of demographic growth equalling or exceeding the regional average, based on fertility rates higher than those in the preceding group and varying but perceptibly improving levels of mortality and expectation of life.

15/ CELADE, "Crecimiento urbano de siete países de América Latina. Tendencias en el período 1940-1970; perspectivas para 1960", Part I, Santiago, CELADE-IDB, July 1973.

/Table 1

Table 1

TYPES OF COUNTRIES BY GROWTH TRENDS AND SELECTED SOCIO-ECONOMIC VARIABLES

Type	Total population 1975 a/	Natural growth per thousand a/	Gross birth rate (per thousand) 1970-1975	1970-1975				Percentage of urban population (1970) b/	Gross domestic product per capita (in dollars at 1963 prices), 1973 b/	Gross agricultural product as a percentage of the gross domestic product, 1973 b/	Percentage of literates in 15 plus age group, 1968 b/	Enrollment in secondary education as a percentage of the 14-19 age group b/
				Overall fertility rate a/	Gross mortality rate (per thousand) a/	Expectation of life a/	Dependency index (per thousand) a/					
Type I												
Argentina	25 384	13.04	21.80	2.98	8.76	68.19	57.17	66.4	1 141	12.3	91.4	40.5
Uruguay	3 060	11.61	20.83	2.91	9.22	70.08	58.36	70.2	681	22.1	89.4	60.8
Type II												
Cuba	9 528	23.03	28.95	4.03	5.92	72.30	78.62	46.2	-	-	96.1	26.8
Chile	10 621	17.78	25.88	3.35	8.10	64.35	73.32	54.6	610	8.1	89.6	49.4
Type III												
Brazil	109 730	28.35	37.12	5.15	8.77	61.39	83.40	38.5	447	16.9	69.6	35.6
Colombia	25 890	31.82	40.61	5.88	8.79	60.91	96.04	43.1	407	27.8	72.9	20.5
Costa Rica	1 954	27.55	33.44	4.65	5.89	68.18	89.32	32.2	569	22.0	85.8	37.8
Ecuador	7 090	32.29	41.76	6.29	9.47	59.63	96.10	32.9	388	23.0	72.0	26.5
Mexico	59 204	33.38	42.00	6.46	8.62	63.22	98.88	35.3	744	10.6	77.5	24.1
Panama	1 676	28.94	36.08	5.06	7.14	63.53	89.18	37.5	717	17.9	78.3	43.0
Peru	15 326	29.10	41.02	5.80	11.92	55.65	89.66	33.4	418	15.8	67.0	39.8
Venezuela	12 213	29.05	36.06	5.20	7.01	64.74	94.74	56.7	935	6.2	85.0	38.6
Type IV												
El Salvador	4 108	31.08	42.17	6.19	11.09	57.83	100.56	18.1	324	25.5	50.8	19.6
Guatemala	6 130	29.10	42.82	6.07	13.72	52.93	91.17	17.7	383	28.1	37.9	10.9
Honduras	3 037	34.69	49.26	7.28	14.57	53.49	97.00	15.6	216	34.0	47.0	12.7
Nicaragua	2 318	34.45	48.32	6.92	13.87	52.86	103.56	25.3	344	26.4	49.8	19.5
Dominican Republic	5 118	34.88	45.84	6.92	10.96	57.76	103.07	27.7	299	18.7	53.1	19.4
Paraguay	2 628	33.63	42.25	6.32	8.62	61.55	102.59	22.5	315	33.9	69.0	17.6
Bolivia	5 410	25.76	43.72	6.15	17.96	46.75	85.06	22.7	210	20.4	39.8	16.0
Haiti	5 888	24.80	41.98	5.82	17.18	47.46	84.72	7.0	87	46.9	18.8	4.2
Regional average		27.93	37.21	5.29	9.28	61.47	85.78	34.6	486	4.6	65.5	28.2

Sources: a/ Latin America: "Demographic situation around 1973 and prospects for the year 2000", op. cit.
b/ Economic Survey of Latin America, 1973 (E/CN.12/974/Rev.1), October 1973.

/In particular

In particular, Costa Rica and Panama are outstanding not only inasmuch as they show the lowest fertility rate in the group, but also because their mortality levels are among the lowest in the whole region.

A third group might be made up of the remaining Central American countries and those of the Caribbean, to which might be added Paraguay. In these both fertility and mortality rates reach their highest levels, as is characteristic of countries in the initial stages of the demographic transition process. In particular, mortality rates still leave ample room for substantial reductions. This situation is especially notable in Bolivia and Haiti, where mortality rates are close on 20 per thousand and the expectation of life barely exceeds 45 years.

The level of economic and social development attained by countries is patently related to their fertility and mortality levels, although somewhat less closely in the latter case. There are, however, significant exceptions to this rule (Venezuela, Mexico, Costa Rica) which suggest that a cautious view should be taken of statements assuming a simple and negative relation between development and population growth.

D. Types of countries by urbanization trends

The urbanization figures analysed hitherto do not reveal the plurality of situations which emerges when a more careful study is made of the "urbanization cycle" of the Latin American countries: a plurality resulting from dephasing and from variations in levels and intensity. On the basis of similarity of characteristics, countries can be grouped in three major types, which will be described below.

The first type comprises Argentina, Uruguay, Chile and Cuba. They are countries in which urbanization began early (the 1950 figures were already high), maintains a high level (60 per cent in nuclei of 20,000 inhabitants and over in 1970) and advances at a moderately rapid pace; with high but declining degrees of concentration (79 per cent of the urban population in cities of 100,000 inhabitants and over,

/in 1960;

in 1960; 77 per cent in 1970); and with intensive concentration in the primate city (between 50 and 60 per cent of their urban population in the capital).

The second type is constituted by Venezuela, Mexico, Panama, Costa Rica, Colombia and Brazil. They are countries in which urbanization took place late, at moderately low levels and very fast. Urban concentration is less marked than in the first group of countries, but shows an upward trend, and the percentages of the urban population in the capital city are low.

The rest of the countries constitute a third type, characterized by very belated urbanization at low or moderately low levels; moderate but increasing urban concentration; and a high index of concentration in the primate city.

The countries pertaining to the first type coincide with those in which levels of fertility and mortality are low, while those belonging to the last type maintain comparatively high fertility and mortality levels. In contrast, the middle type shows different situations as regards population growth, and it is also here that exceptions to the overall relation between development and population are mainly found.

III. STRUCTURAL HETEROGENEITY AND POPULATION DYNAMICS

A. Structural heterogeneity and differential growth

The diversity of country situations is linked to the internal heterogeneity of each country, which goes to shape different social and demographic contexts.

Common to development in Latin America is the interdependent coexistence of forms of production, social relations, institutions and value systems conceived during different stages and situations in history.

The structural heterogeneity resulting from the predominant mode of development in the continent has produced sharp inter-regional contrasts within each country and an enormous split between the urban and rural areas as far as the economic activities which prevail in them are concerned, and also their levels of income, education, health, etc., or the cultural patterns most generally accepted in them.

Practically all the available evidence shows that urban fertility is lower than rural fertility in the countries themselves. A comparison of the urban fertility levels in different countries of the region reveals considerable differences between them together with an inverse ratio between the fertility level of the country and the size of the urban and rural fertility differences in it. On occasion, the rural fertility levels of a country or region may be lower than the urban levels of another country or region.

Among the largest countries, Brazil and Mexico are sharply differentiated socio-economically and as far as the fertility levels in their various regions are concerned.16/

16/ For Brazil, see Peláez, César and Martine, George: "Population trends in the 1960s: some implications for development", in the Economic Bulletin for Latin America, Vol. XVIII, Nº 1 and 2, 1973; Table II-5. For Mexico, see: Demografía en el Noreste de México, Centro de Investigaciones Económicas, 1965, p. 45.

/Marked regional

Marked regional differences have also been found in both urban and rural fertility in some Andean countries; in the case of Ecuador 17/ and Peru 18/ the coast shows higher levels than the highlands, as in the case of Bolivia the Cochabamba region has the lowest levels.19/

It should be pointed out that regional differences in fertility do not necessarily correspond - the results mentioned in the last paragraph prove this - to the results expected if it were accepted that higher levels of development always accompany lower levels of fertility. Although various explanations for these unexpected results have been sought, those based on comparisons of children/women ratios are not very valid since the numerator of this measure of fertility (children from 0 to 4 years old) is affected by infant mortality which is higher in the less developed regions and thus reduces the numerator, giving as a result a lower fertility rate than that actually existing.

However, since differences exist in some cases where different measures of fertility have been used, it would seem important to investigate the problems in more detail.

Available evidence on mortality is scanty, particularly from a spatial point of view, and caution should be observed in making affirmations. If the data from the first half of the century are made use of, persons living in urban nuclei were not at any notable advantage as far as the mortality rate was concerned. Some authors have even gone so far as to affirm that at that time the problems of health conditions, over-crowding and poor nourishment, typical of cities in the first stages of a rapid process of urbanization, may have produced higher urban than rural mortality rates.20/

17/ Merlo, Pedro, Ecuador: Análisis de la encuesta de fecundidad urbana y rural realizada en el año 1967-1968. CELADE, Serie C, Nº 133, December 1971.

18/ Salazar Huamán, Julio "Diferenciales de la fecundidad en la zona urbana del Perú", in Conferencia Regional Latinoamericana de Población, Acta, El Colegio de México, page 325.

19/ Llano, Luis, "Condicionamientos socio-culturales de la fecundidad en Bolivia", ibid., pp. 334-340.

20/ Davis, Kingsley and Casis, Ana: "Urbanization in Latin America", The Milbank Memorial Fund Quarterly, Vol. XXIV, Nº 2, April 1946.

/It is

It is not possible to reject this interpretation entirely as regards the poorest urban strata. There are, however, strong arguments to support the theory that the drop in mortality has been more rapid in urban areas than in rural areas. In fact, when types of countries were distinguished according to their fertility and mortality situation, mention was made of the significant negative correlation between this latter variable and levels of organization, literacy and per capita product.

It has also been discovered that life expectancy shows a significant correlation with protein consumption, the availability of health service, the number of inhabitants per hospital bed, the percentage of dwellings with running water, and particularly the degree of literacy.21/

In view of the fact that all the indicators of the level of living show that this level is higher in urban than in rural areas,22/ the mortality rate would be expected to be significantly lower in the former than in the latter; the contradictory data may be explained by an under-registration of death in rural areas.23/

The expectation of a lower mortality rate in urban areas has been confirmed by research carried out in recent years, which has also brought out the extent of the differences between urban and rural mortality: in at least 10 countries of the region mortality in rural areas between 15 and 44 years of age is probably between 2 and 4 times greater than in the capital cities.24/

21/ ECLA, Population and Development, op. cit.

22/ See the next section of this document.

23/ Taking this under-registration into account, Eduardo Arriaga found that contrary to appearances rural mortality was higher in Mexico than urban mortality. See, by the same author, "Rural-Urban Mortality in Developing Countries: An Index for Detecting Under-Registration", Demography, Vol. IV, Nº 1, 1967.

24/ Panamerican Health Organization, Inter-American Investigation of Mortality in Childhood, provisional Report. For data on this for Chile, see, Lira, Luis Felipe, Chile: Factores económicos sociales que afectan a la mortalidad (1960), CELADE, Series C, Nº 149, October 1972, page 16. For Honduras and Nicaragua: Población y Desarrollo en América Latina, op. cit., p. 190 and p. 188; (cont.)

/As regards

As regards regional differences in mortality, the data available at the present time (for the cases of Chile,25/ Argentina 26/ and Mexico 27/) show clearly that a higher life expectancy is directly related to the higher level of development achieved by the region and the more satisfactory conditions of living reached in it.

B. The migratory process and the sectors which condition its structure 28/

The inter-regional, rural-urban and urban nuclei contrasts, in structure within each country, are also to be found at the root of the whole vast migratory movement which is radically changing the settlement patterns and the way of life of the population of the continent. It is also these contrasts which are affecting international emigration of both semi- and unskilled labour and highly-skilled labour.

In this section a brief analyses will be made of inter-regional migrations between urban nuclei and international migration leaving rural-urban migration for later discussion.

24/ (cont.) Rice, Ruth and Serrano, Carlos, "La deficiencia nutricional y la mortalidad en la niñez", Bulletin of the Panamerican Sanitary Bureau, Vol. LXXV, Nº 1, July 1973; Behm, Hugo, "Mortalidad infantil en Chile: tendencias recientes", Vol. XI, Nº 3, September 1970; Livingston, Mario y Raczynski, Dagmar, "Distribución Geográfica del Estado de Salud en Chile", 1970, CEPLAN, mimeographed, 1974.

25/ Alvarez, L. y Pujol, J.; Chile: Tablas abreviadas de mortalidad por regiones, 1960-1961, Santiago, CELADE, Series A, Nº 76, 1967.

26/ Somoza, Jorge, La mortalidad en la Argentina entre 1869 y 1960, Buenos Aires: Centro de Investigaciones Sociales, Instituto Torcuato Di Tella - CELADE, 1971.

27/ Lerner, Susana and Morelos, José, Proyecciones regionales de población total y parcial activa, por sexo y grupos de edad, 1960-1985, mimeographed, CEED-M, Colegio de México. Also Cordero, Eduardo, "La subestimación de la mortalidad infantil en México", Demografía y Economía, Vol. II, 1968.

28/ The aspects referring to migratory selectivity (by sex, age, education, etc.) or their subjective components, are not considered in this section, which is only an effort to illustrate the influence of regional and spatial socio-economic disparities on the volume and the trend of migratory flows.

/In the

In the case of inter-regional migrations, a study of those occurring between provinces shows, generally speaking (with the exception of Chile and Costa Rica) that the percentage of residents outside their province of origin has increased in the course of time.

Data available for Argentina, Brazil, Mexico, Chile, Venezuela and Colombia 29/ on the volume of inter-provincial migration, make it possible to say that:

(a) the places of destination of the movements include few important receiving bodies, the main one being the largest urban centre in the country;

(b) the movements take place from little developed areas to areas with a relatively higher level of development.

The study of migration rates by states and provinces for the above-mentioned countries makes it possible to expand the foregoing analysis and make it more accurate. Table 2 gives these rates for the period 1960-1970 and the percentages of the active non-agricultural population and illiterates in the total population for 1960. The following conclusions may be reached on the basis of this data:

(a) Those countries in which socio-economic differences among regions are very marked, tend to show more variability in their migration rates than those where such regional differences are not so pronounced.

(b) It may be observed from a comparison of the giving and receiving provinces with the highest migration rates in each country that there are marked socio-economic differences between one province and another in some cases (Chile, Mexico and Venezuela). In others, however, with the exception of some provinces, there are no clear differences in the socio-economic indicators which have been used here.

(c) Lastly, colonization policies would appear to have made a strong impact on immigration to some provinces, and generated very high and favourable rates of migration.

29/ See the Appendix, table 8.

/Table 2

Table 2

PROVINCES GIVING AND RECEIVING MIGRANTS (FIRST 5 PROVINCES)
IN SIX LATIN AMERICAN COUNTRIES, 1960-1970

Receiving Provinces	Net annual migration rate (per thousand)	Percentage of active non agricultural population (1960)	Percentage of illiterates in the population of 10 years old and over (1960)	Giving Provinces	Net annual migration rate (per thousand)	Percentage of active non agricultural population (1960)	Percentage of illiterates in the population of 10 years old and over (1960)
Argentina (1960-1970)				Argentina (1960-1970)			
Sta. Cruz y Tierra del Fuego	28.89	75.2	5.5a/	Chaco	-26.58	59.1	21.2
Buenos Aires	12.88	88.4	5.6	Catamarca	-24.13	74.0	11.6
Neuquen	7.43	71.7	19.0	Santiago del Estero	-21.79	71.1	19.8
Río Negro	6.24	62.2	16.5	Tucumán	-21.58	70.2	13.0
Chubut	4.25	74.3	13.3	Corrientes	-19.58	62.8	21.5
Brazil (1960-1970)				Brazil (1960-1970)			
Distrito Federal	94.06	96.1	23.6b/	Espíritu Santo	-17.57	47.5	39.9
Matto Grosso	23.28	39.8	42.2	Sergipe	-14.90	39.1	58.5
Paraná	16.00	36.8	36.3	Maranhao	-14.65	21.6	64.3
Rondonia	12.69	53.1	42.4	Minas Gerais	-13.83	50.4	40.4
Sao Paulo	10.72	79.6	21.4	Paraíba	-13.30	35.2	60.6
Colombia (1950-1960)				Colombia (1950-1960)			
Bogotá	39.10	97.1	12.0c/	Tolima	-18.65	39.3	35.1
Meta	31.46	35.5	31.7	Cundinamarca	-15.49	36.6	30.8
Intendencia de Caquetá	24.07	24.9	44.3	Chocó	-12.61	36.0	59.3
Magdalena	13.84	39.2	41.7	Boyacá	-10.02	31.7	38.5
Atlántico	10.47	83.9	20.0	Nariño	-9.32	40.8	39.2
Chile (1950-1960)				Chile (1950-1960)			
Tarapacá	18.57	86.0	8.4c/	Malleco	-22.07	46.4	30.4
Santiago	13.15	91.6	10.2	Maule	-18.64	39.7	28.5
Magallanes	9.90	83.0	6.8	Valdivia	-18.56	54.4	23.4
Valparaíso	5.69	87.4	9.0	Colchagua	-17.35	36.9	32.2
Atacama	4.75	88.1	14.7	Linares	-15.75	41.5	28.8

Table 2 (concluded)

Receiving Province	Net annual migration rate (per thousand)	Percentage of active non agricultural population (1960)	Percentage of illiterates in the population of 10 years old and over (1960)	Giving Province	Net annual migration rate (per thousand)	Percentage of active non agricultural population (1960)	Percentage of illiterates in the population of 10 years old and over (1960)
Mexico (1960-1970)				Mexico (1960-1970)			
México	34.79	38.6	39.4	Zacatecas	-24.06	19.8	30.8
Quintana Roo	19.73	30.8	30.7	Hidalgo	-15.58	29.9	52.5
Baja California Norte	18.67	60.5	12.8	Durango	-15.22	29.7	19.1
Morelos	14.97	39.5	35.6	Tlaxcala	-14.39	31.6	35.0
Nuevo León	14.46	67.7	16.2	San Luis Potosí	-14.14	31.2	42.3
Venezuela (1960-1970)				Venezuela (1960-1970)			
Miranda	23.71	76.3	26.6	Sucre	-24.02	44.4	46.6
Carabobo	18.60	76.6	29.9	Monagas	-21.33	43.7	41.3
Aragua	18.54	73.8	28.6	Trujillo	-19.69	37.6	53.6
Bolívar	18.32	66.8	30.6	Falcón	-18.25	55.5	41.2
Amazonas	13.54	55.7	49.7	Cojedes	-13.65	34.2	56.6

Source: Estimated on the basis of data collected by Jorge Arévalo in Migración Intercensal de Seis Países de América Latina, CELADE, Series A, N° 122, November 1974.

a/ Estimated for the population of 14 years of age and over.

b/ Estimated for the population of 5 years of age and over - Data for 1970.

c/ Estimated for the population of 7 years of age and over.

/The migratory

The migratory movements are very closely linked up with the urbanization process; it has been estimated that they account for at least half of urban growth.

Three types of migration with an urban destination may be distinguished: those originating in rural areas, those starting in some other urban centre and those occurring within the perimeter of the metropolitan centres.

Direct migration from rural areas to the major metropolitan centres accounts, for only a small percentage of total rural emigrants in all those cases for which data is available, which suggest that it is the smaller urban nuclei which are the main points of arrival of these migratory flows. The rural-urban migrations would appear to be the main factor determining the appearance and growth of small urban and semi-urban nuclei, which may be detected in the region and also make an important contribution to the growth of the intermediate urban centres.

Logically enough, urban-urban migration is in direct ratio to the country's degree of urbanization. The data available are not sufficient to permit of conclusive statements at the present moment, but it may be inferred from the tendency towards concentration in larger urban nuclei and in the main city (urban primacy) that in the countries of early urbanization the migrations moved towards this main city (increasing urban primacy and decreasing concentration); in those of late, moderately low and rapid urbanization, the increase in concentration in nuclei of 100,000 inhabitants and over and 1 million and over would seem to have one of its causes in migration towards these nuclei from smaller urban centres; lastly, in countries with very late, low and moderately rapid organization, migration affects the growing concentration of the population in urban centres of intermediate size.

The growth of the metropolitan nuclei and the drastic internal changes which they have undergone makes it necessary to give some importance to the process of the urban re-absorption of the migrants attracted to them, and to the internal geographical re-distribution

/caused by

caused by the natural growth of these nuclei. Both processes may be termed "intra-metropolitan migrations" and include both the movements of the upper strata from the central areas to the urban and suburban periphery - creating a low density settlement pattern adequately equipped with infrastructures and services - and the segregation of the lower strata in slum areas or areas which are ecologically marginal and insufficiently equipped with services.

The intra-metropolitan migrations cause the emergence of problems connected with the growth of the metropolis and underscore the lack of organization and rigidity of the space-function structure of the metropolitan cities; these topics will be dealt with at a later point in this document.

In addition to the effect of the migrations within the urban centres, the unbalanced regional development of the countries of Latin America and the migratory movements which this causes has retarded the process of territorial structuralization, so that although it is true that nearly all the countries have urban networks interconnected by a highway system, in very few of them can it be said that an urban system exists, i.e., a group of graded centres, functionally interrelated, with complementary and specialized features, and intensive and flexible relations. The achievement of such an urban system implies a vigorous effort to reach a more balanced regional development and create the necessary infrastructure.

C. New aspects of international migrations in Latin America

Since the Conquest, the continent of Latin America has been receptive territory for overseas immigrants. As from the middle of last century, the migratory flow spread more or less to all the nations of the region, although it reached its greatest spread in the Atlantic countries of the Southern cone. The succession of political and economic convulsions in Europe contributed to maintaining this flow until after the Second World War.

As from the 1950s, however, the migratory flow underwent significant changes. The economic prosperity in industrial Europe tended to absorb

/the labour

the labour surpluses of the continent, while, paradoxically enough, Latin America was becoming to some extent an exporter of manpower; furthermore, the intra-regional migratory flows, up till then of little importance, were intensified.

There are two major types of international migration which should be distinguished: migration constituted by unskilled labour and the migration of medium or highly-skilled personnel.

1. Migratory movements of unskilled labour

For the most part, these migratory movements are after a fashion a continuation of internal migrations across the frontiers: they began with movements of a "rural-urban" type which now tend to continue towards the major urban centres. They move from areas of less development to other more developed areas and their basic incentive is to improve their level of living.

(a) Geographical distribution of the migratory movements

Many Latin American countries are at one and the same time emigration and immigration countries. Some, like Paraguay, Bolivia, Colombia or El Salvador, are mainly centres of emigration; others, like Venezuela and Argentina, receive immigrants. Specific situations may transform the nature of the country; such is the case of Ecuador, which has been receiving Colombians and Peruvians since the petrol boom, or Uruguay which from being an immigration country has become an emigration country.

Some of the main migratory flows of the type examined here are given below:

(i) Migration to Argentina from the frontier countries: Paraguay, Chile and Bolivia in particular.

(ii) Migrations of Colombians to Venezuela for the most part, and to a lesser extent to Ecuador and Panama.

(iii) Migrations among Central American countries, basically from El Salvador to Honduras. There too the relative prosperity of Panama and Costa Rica constitutes a centre of attraction.

(iv) Migration from the Caribbean islands.

/(v) The

(v) The large-scale migration of Mexicans to the United States; this is a case of migration to a frontier country situated outside the Latin American region.

(vi) Recent Brazilian emigration to frontier areas in Paraguay, first of all for the coffee crop and then for diversified modern-type crops. This migration offsets Paraguay emigration, since it brings with it a whole economic system which takes its impetus from the country of origin.

The majority of these movements are spontaneous, although this does not exclude the possibility of intervention by entrepreneurs in some cases, or even state initiatives aimed at providing labour in some deficient sector of production. This spontaneous aspect means that in many cases the presence of such migrants is considered illegal, and this lends itself to the deterioration of their working conditions and insecurity as regards the duration of their stay. This is one of the basic points which justifies the importance of studying their situation in depth and seeking solutions.

Studies on the volume of these migratory flows have encountered a major difficulty: the inadequacy of data on migrants. The statistics available make it difficult to evaluate with any exactness the volume of the migratory movements in that, in addition to errors in the actual collection of data, they are unable to take into account, except purely as an estimate, the phenomenon of illegal migration which almost certainl constitutes a high proportion of total migrants.

Census and continuing statistics thus tend to deprive of importance a phenomenon which would appear to be acquiring growing importance in Latin American society owing to the problems it presents. It is obvious that this is a constantly increasing movement and it is a basic requirement to improve registers and carry out complementary research in order to have a more accurate idea of its extent.

2. The emigration of skilled labour

Another new aspect of the international migratory movements in Latin America is the exodus of skilled human resources, the so-called "brain drain". This is a general feature of the developing countries, which has been accentuated since the developed countries, the United States in particular, modified their migratory policies and opened the way to the inflow of skilled personnel.

A quantitative estimate of the phenomenon is hampered by the lack of data on exits. Data on the evolution of the migratory flow of professionals, technical experts and related workers from the different Latin American countries to the United States between 1961 and 1970 (see table 3) shows a progressive increase up to 1968. As from 1968 and up to 1970 a decline may be observed in the number of emigrants to the United States from all the countries, except Paraguay, El Salvador, Nicaragua and the Dominican Republic. The data for Cuba may be considered to be the result of an exceptional situation, and Cuba is not included in the estimate given.30/

The study from which these data were taken endeavours to relate more closely the effect of the emigration of professionals on the economy and the development potential of the country of origin. Table 4 compares the volume of emigration of professionals with the flow of university graduates and the economically active population, so as to establish the impacts of emigration on local stocks of highly skilled manpower. On the basis of these data three categories of countries may be distinguished: the first consists of those which have large numbers of professionals available locally (number of graduates per number of economically active persons), but also a high emigration rate (Argentina, Colombia, Mexico, Venezuela, Brazil and Chile). The second has fewer university graduates available and relatively high emigration rates, which means that the losses are even greater in relativ terms than in the previous group (Central American countries). Lastly, the third category has fewer professionals available than the first grou but also a lower emigration rate (Ecuador, Panama, Paraguay, Uruguay).

30/ Chaparro, Fernando, "Emigración de Profesionales de América Latina, Síntesis de la Situación", p. 8.

/Table 3

Table 3

LATIN AMERICAN IMMIGRANTS ADMITTED TO THE UNITED STATES AS PROFESSIONALS, TECHNICIANS AND RELATED WORKERS, 1961-1970

Place of origin	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Total
Argentina	552	531	781	1 159	973	699	549	633	364	235	6 476
Bolivia	54	77	102	138	150	94	94	81	66	72	928
Brazil	253	318	362	382	465	356	284	324	223	236	3 203
Chile	142	151	174	174	240	156	135	176	120	120	1 588
Colombia	376	511	691	973	868	777	404	764	669	395	6 408
Ecuador	108	221	333	295	358	286	161	328	289	192	2 571
Paraguay	13	42	26	28	22	21	21	14	20	15	222
Peru	171	198	281	335	203	148	147	168	138	130	1 919
Uruguay	29	29	34	44	54	60	33	52	51	62	442
Venezuela	191	409	384	296	177	159	122	153	110	117	2 118
Costa Rica	98	192	166	226	219	105	78	122	116	84	1 406
Cuba	1 145	981	666	1 276	1 581	1 358	2 747	4 603	634	631	15 622
El Salvador	98	109	125	128	149	99	62	83	90	86	1 029
Guatemala	77	98	138	147	156	158	97	144	128	78	1 221
Haiti	127	188	238	245	398	270	207	510	460	517	3 160
Honduras	88	111	128	179	184	98	65	90	61	63	1 087
Mexico	636	852	816	666	929	864	843	824	590	500	7 520
Nicaragua	83	53	64	77	72	59	47	25	29	44	503
Panama	115	166	119	103	124	81	74	109	80	110	1 081
Dominican Republic	237	351	449	276	311	495	300	274	299	228	3 220
Total	4 587	5 588	6 077	7 147	7 633	6 343	6 470	9 477	4 537	3 915	61 774
Excluding Cuba	8 442	4 607	5 411	5 871	6 052	4 985	3 723	4 874	3 903	3 284	46 152

Source: United States Department of Justice, Immigration and Naturalization Service, Washington, D.C.

/Table 4

Table 4

RATIO OF PROFESSIONAL EMIGRANTS TO THE UNITED STATES TO HIGH LEVEL GRADUATES IN THE SAME EMPLOYMENT, WITH A PHASE SHIFT OF FOUR YEARS FOR SEVENTEEN COUNTRIES OF LATIN AMERICA, 1959-1967

Country	Emigrants	Graduates	Graduates/ EAP a/ (1962-1963)	Graduate Emigrants (percentage)
Group I				
Argentina	1 082	27 374	166	2.9
Mexico	1 441	25 881	41	5.6
Colombia	1 495	14 651	67	10.2
Venezuela	509	13 430	117	3.8
Brazil	681	120 945	78	0.6
Chile	337	10 184	94	3.3
Group II				
El Salvador	178	437	9	40.7
Nicaragua	123	519	21	23.7
Guatemala	148	764	8	19.4
Honduras	133	537	24	24.8
Costa Rica	217	1 934	145	11.2
Group III				
Ecuador	375	3 410	41	11.0
Panama	143	1 799	97	7.9
Paraguay	40	1 102	56	3.6
Uruguay	46	2 401	74	1.9

Source: Technological Development Unit: Algunas Características de la Emigración de Profesionales y Técnicos de América Latina a los Estados Unidos; Washington, D.C., Panamerican Union, June 1968, page 15 (Table N° 5).

/The table

The table is based on figures for a group of years for which data is available on emigrants and graduates, with a four-year phase shift between the two concepts. In some of these countries the proportion of university graduates who emigrate is really alarming, especially in the countries of the second group.

The figures of the table 4 provide a picture of what this type of emigration means in Latin America. They do not, however, make it possible to grasp aspects as difficult to evaluate as the loss implied in terms of the increase in economic productivity which the activity of the migrants would have brought with it, or their contributions of innovations or impetus to social change.

In any case, the realization which has come to the governments of the importance of this type of emigration makes it necessary to make further progress in present awareness of its volume and of its causes.

IV. AGRARIAN STRUCTURE AND POPULATION DYNAMICS

A. Changes in the agricultural sector

The traditional structure of agriculture in Latin America has been modified to a greater or lesser extent by the growth trends and the spatial distribution of the population described above. The structural features of the rural areas also affect the natural growth of the population in them, and lie at the root of the mass process of rural-urban emigration.

The population increase and the urbanization process constitute a double challenge for agriculture to increase food production at a rate at least equal to that of population growth less the individual food share decrease or the State find itself compelled to import food from abroad; and to provide sources of employment for the increasing numbers of the population or the expel them en masse towards the urban areas.

There were two ways open to the demand for foodstuffs which are not mutually exclusive: (a) to extend the agricultural frontier; (b) to improve the productivity of land which has already been farmed.

Although the first method has been tried in several countries of the region, the major investment which it requires has meant that the expansion of the area under cultivation is a slow process and takes place at an increasingly slow rate: 2.6 per cent annually between 1960-1965, 1.3 per cent between 1965-1970, and only 0.5 per cent annually between 1970-1973.31/

The contrast between this slow absorption of new land and population growth has resulted in a reduction of the per capita area under cultivation from 0.323 hectares in 1959/1961 to 0.283 hectares in 1972.32/

31/ ECLA: La alimentación de América Latina dentro del contexto económico regional y mundial, preliminary version, August 1974, p. 60.

32/ Ibid.

/The take-over

The take-over of new land for farming has been of particular importance in Brazil and fairly important in Mexico and Colombia.

The second possibility - the need to increase productivity and efficiency in the enterprise - falls within a context of more state control, when the intensive use of the labour force is linked up with political and labour problems, while mechanization in agriculture is assisted by duty-free imports by the State. This means that the farmers of an innovating turn of mind prefer to modernize their enterprise by replacing labour with agricultural machinery.

The emergence of modernized farms, however, did not lead to the disappearance of the old latifundium-minifundium structure, nor did it mean any change in the heavy concentration of ownership in agriculture.

National and international pressure to change this situation led several governments of the region to approve agrarian reform programmes aimed at achieving a fairer distribution of property and income, increasing output and agricultural productivity, and reducing rural-urban migration.

The persistence of traditional land-owning patterns and the emergence of new forms of organizing agricultural output has placed a heterogeneous note in the structure of agriculture in Latin America, since a distinction must now be made at least between archair latifundia, modern plantations and commercial farms, minifundia of various types, indigenous communities, haciendas and estancias on the agricultural frontier, agrarian reform settlements, socialist-inspired farms, etc.

B. Heterogeneity in the structure of society, employment and levels of living

The new modes of organizing production have led to profound changes in labour relations, and have caused the emergence of a rural proletariat in the plantations and commercial farms, the generalization of payment in cash (and not in kind) in the latifundium-dominated areas, the creation of cooperative-type relations in others and, generally speaking, have placed narrow limits on the capacity of the farms to absorb labour. At the same time, seasonal labour has come to acquire an even greater importance than it had originally.

/The features

The features which the agricultural development of the region has been acquiring have not only been of little advantage in providing for the total employment of the additional labour force created by the growth of the population, but they have also prevented any significant improvement in the living conditions of the peasant population, from taking place, and their influence has been decisive in maintaining the high rates of population growth and the mass emigration from the country to the city.

If the difficulty of measuring agricultural unemployment and underemployment is duly taken into account, the various efforts which have been made to determine their magnitude tend to indicate that unemployment is comparatively lower in agriculture than in the urban centres.33/ Rather the contrary, it may be concluded from the various attempts to estimate agricultural unemployment that this is acute, particularly in the minifundium areas and among the indigenous communities.34/

In many countries the average income of peasants and agricultural workers are at levels lower than is needed to cover minimum expenditure on food, clothing and other items.

It should also be mentioned that the incomes of agricultural workers and peasants in the majority of the countries have apparently continued to deteriorate compared with urban workers.

33/ Kirsch, Henry: "Employment and the utilization of human resources in Latin America". Economic Bulletin for Latin America, Vol. XVIII Nº 1 and 2, 1973, pages 45-87.

34/ For empirical confirmations of this generalization, see: ECLA FAO, ILO, IICA, SIECA, OTC and OAS, Tenencia de la Tierra y Desarrollo Rural en Centroamérica, Editorial Universitaria/EDUCA, 1973; ONEC and INP, La población del Perú, Lima, Perú, 1974; Kirsch, Henry: op.cit., page 58 and note: Barraclough, Solon and Domike, Arthur, "La estructura agraria en siete países latinoamericanos", Trimestre Económico, México, Nº 130, 1966, pp. 235-301.

/Lastly, there

Lastly, there are also indications that greater inequality has occurred between the incomes of the rural proletariat of the plantations and modern farms and those of the minifundium peasant.35/

Owing to its very close link with the living conditions of the population mention should also be made of the educational situation in rural areas.

The data on educational levels in the urban and rural areas indicate that the differences between them persist and are very considerable even in countries with low overall levels of illiteracy: rural illiteracy is three times greater than urban illiteracy in Argentina, Chile and Costa Rica, which are the countries with the lowest levels.36/ In some countries (El Salvador, Honduras, Guatemala), the differences between urban and rural illiteracy were greater in the population of 15 to 19 years of age than in the population of 55 to 59 years of age; while in the other countries for which data was available, government efforts to extend educational services to the rural areas have meant that the youngest section of the rural population has reduced the gap between it and the urban population of the same age group.37/ On the other hand, surveys and field studies have shown that illiteracy increases the further one goes from the urban centres and varies from region to region.

Lastly, medical and health services in all the countries on which there is data are available to a much smaller extent in rural than in urban areas.

35/ For a check of these three points consult: ONEC and INP, La Población del Perú, op.cit.; Webb, Richard, "La distribución del ingreso en Perú", in Foxley, Alejandro: Distribución del Ingreso, México: Fondo de Cultura Económica, 1974, pp. 73-89; Weiskoff, Richard, "Distribución del ingreso y crecimiento económico en Puerto Rico, Argentina y México", in: Foxley, Alejandro: op.cit., pp. 111-147.

36/ Frejka, Thomas, Análisis de la situación educacional en América Latina, CELADE, Santiago, Chile, 1974.

37/ Ibid., table VI-16, p. 218.

C. Rural social heterogeneity and population growth

The situation described above makes up the structural context which conditions demographic performance in the rural areas. Although it is essential to clear up the link between this context and the demographic variables in order to include the latter in the development plans of the governments, the data available is inadequate and fragmentary, and necessarily introduces a theoretical note in the generalizations which could be made.

As far as rural mortality is concerned, it has already been mentioned how little is known about it. However, the same reasons which make it possible to affirm that it is higher than urban mortality suggest that the highest levels are to be found among the least educated and poorest strata in isolated and agriculturally backward areas.

Fertility, the other component of the natural growth of the population, is also conditioned in numerous forms by the social context in which the couples are to be found. The different forms of tenure, the different proportions in which the farms combine the factors of production, the labour relations predominating in them, not only determine the existence of social strata with clearly differentiated levels of living, but also whether single persons predominate or not in the population and the type of family most common in each stratum. The different structure and system of family values influences the age of initiation in sexual unions, the interval of waste in the reproductive period, voluntary or involuntary abstinence and the use or otherwise of contraceptives, all of which contribute to determining fertility.

Once again the lack of empirical knowledge on many of these points should be recognized; this makes a full diagnosis impossible at this moment. It is known that rural fertility in all the Latin American countries is considerably higher than urban fertility, and this difference has been growing with time. Similarly, it is known that there are major differences not only between countries (around 1960, rural birth rates standardized by the specific fertility rate by age of Puerto Rico, varied between 47.7 in Haiti and 34.7 in Chile,

/with an

with an average of 40.4) 38/ but also within them, as may be seen from an examination of the line of totals in table 5.

Although various researchers have attempted to link the differences in fertility with the degree of development of the rural regions, it is not possible to reach any conclusions on this point for the reasons already given in connexion with the methods of measuring fertility which are generally used.

A different approach to the problem will thus be used here; through an examination of the factors which condition rural fertility differences an attempt will be made at a tentative identification of the socio-economic rural milieux with the highest rates. Following the practice established by specialists in this area, a brief mention of the factors connected with nuptiality will be made, followed by the examination of some of the elements which condition fertility within unions.

As far as the first group of factors is concerned, the studies made confirm that there are considerable differences in the proportion of single women to be found in the different rural areas, but at the present moment there is no clear awareness of what social features are linked to these differences.

Age at marriage is another pre-union factor which affects fertility. Studies made have discovered that this also varies according to the rural areas, with Mexico where the highest percentage of young married women is to be found.39/ The same studies have also emphasized the major influence of the level of education on the age at marriage, since it has been discovered that in all the countries for which it has been possible to collect data the porportion of women who marry before twenty years of age drops appreciably where functional illiteracy gives way to some years of primary education.40/

38/ See, Carleton, Robert O.: Aspectos metodológicos y sociológicos de la fecundidad humana, Santiago, Chile, CELADE, Series E., Nº 7, 1970, table II-4, page 83.

39/ See Krumholz, Micaela, Diferenciales en las edades reales, ideales al casarse de la población rural en cuatro países de América Latina. Santiago, Chile, CELADE, December, 1973.

40/ Ibid, table 10, page 21.

/The above

The above factors contribute to determining fertility levels in a country or region, in that they lead to a different frequency of sexual relations and consequently to an increase or decrease in the risk of pregnancy. However, their effect may be offset by high fertility within stable unions, whether these are marriages or not; vice versa, a high proportion of women in stable unions may be associated with low fertility within them. Whether one or the other occur depends on what value the couple gives to the children, the length of birth intervals, voluntary or involuntary abstinence, knowledge and use of contraceptive techniques and foetal mortality.

All the factors affecting fertility within the union are in turn affected by the position which the spouses occupy in the rural-social structure, and very particularly by the type of family which this position and predominant cultural patterns contribute to defining.

Studies on the rural family are almost non-existent at the present time, and this makes it impossible to acquire documentary evidence on how it is adjusting to all the structural changes stemming from rural development. However, non-systematic data would appear to indicate that there are types of family coexisting in rural areas of Latin America which, in the experience of the oldest developed countries, belong to different stages of the process of evolution. In fact, the development of the capital-based farms, with the different forms of labour settlement which they have caused and the transformation of this labour into a rural proletariat does not only imply a greater technical and social division of labour, but also the abolition of the family as a unit of production, limiting its functions to providing affection, child care and consumption.

In families of this type the children cease to constitute additional labour, and rather become a source of expenditure and the deposit of the aspirations of social mobility which the greater complexity of the occupational hierarchy in the most modern sector of agriculture and a better level of education have produced in the parents. The consequence of this more limited definition of the functions of the family and the new role assigned to the children has in other countries been the emergence of a family ideal with a smaller number of children than generally existed before these changes.

/Although the

Although the type of family described may be more common than is usually believed, it seems improbable that it is to be found outside the regions where farms with an advanced system of organizing production predominate.

It would appear to be more frequent to find among the Latin American peasant population a type of family in which the current system of production has not led to a division of labour which cuts out the producer function of the family unit. In the minifundium areas, among the peasants who are still linked to the latifundia by some form of colonato (the old land-tenure system), among the share croppers and tenant farmers of the new estancias and haciendas in frontier areas, all the members of the family - including the wife and small children - contribute to cultivating their little piece of land, either in a continuing form if the husband works outside, or during harvest time.

This union of the producer and consumer functions in the family rules out the incompatibility in the roles of mother and worker frequently exercised by women; this means that their work does not affect their fertility,41/ unlike the situation in certain urban strata. On the other hand it is probable that it leads to a preference for a relatively large number of children, or at least does not contribute to create a motive for small families, although the high rate of infant mortality predominating in such families means in the last instance that the number of surviving children is not very far removed from the number of children in those based on an ideal of a smaller-sized family.

Cultural patterns deeply rooted in history, and religious beliefs, also contribute to defining the type of family predominating in a specific region, and this may substantially modify the features which could be expected in a purely structural analysis.

41/ Fucaraccion, Angel, El trabajo femenino en Bolivia. Un estudio de caso (Provisional report), CELADE, Santiago, Chile, January 1974.

/Lastly, the

Lastly, the family patterns caused by the mode of absorption in the production and culture of the broader social group to which the spouses belong may be modified by the adoption of patterns transmitted through the educational system and the mass communications media.

Education is the social factor which most affects rural fertility.

The results summed up in table 5 are not wholly comparable, and could not be used to infer differences between countries, but they do offer proof that in all cases a higher level of education is associated with a smaller average number of live births. From the policy point of view it is important to recall that it is sufficient to have reached primary school level for fertility to decline appreciably.

The strong impact of education on fertility is due to the fact that it affects several of its determining factors. As has already been said, a higher level of education leads to later marriages than among persons with a lower level of education. Within stable unions, and especially marriages, the education of the spouses largely determines the level of their educational and occupational aspirations for their children: the higher the level, the greater the aspirations. In turn, the higher level of aspirations for the children leads to a preference for comparatively small families and increases the motivation for controlling the birth rate.42/

Furthermore, the level of knowledge about contraceptives among couples in rural areas of Latin America is associated both with the educational level of the mother and of the father and that predominant in the settlement in which they live.43/

42/ For a summary of the evidence on this point, see Raúl Urzúa, "La estructura social y la educación como valor"; a statement presented at the Latin American Conference on Population and Education, University of Houston, Texas, October 1973.

43/ Simmons, Alan and de Jog, Johanna, Education and contraception in Latin America, Santiago, CELADE, May 1974.

/Table 5

Table 5

AVERAGE NUMBER OF LIVE BIRTHS TO WOMEN INTERVIEWED ACCORDING TO EDUCATIONAL LEVEL IN RURAL AREAS OF LATIN AMERICA DURING THE 1960s

Level of education	Bolivia a/			Ecuador b/		Colombia			Chile		Mexico			Peru	Costa Rica
	La Paz Rural	Cochabamba Rural	Santa Cruz Rural	Sierra	Coast	Total Rural c/	Cartagena d/	Neira d/	Cauquenes	Mostazal	Total Rural c/	Guelavia d/	Pebellón d/	Rural a/	Rural c/
Total	4.45	4.17	4.06	4.87	5.14	-	4.91	6.13	3.03	3.48	-	3.80	4.16	-	-
No formal education	4.91	4.60	5.23	5.53	6.68	7.2	5.68	5.83	4.86	4.81	7.6	4.69	5.54	5.38	7.8
Primary	3.71	3.26	3.77	3.91f/	4.57	6.4f/	4.58f/	5.67f/	1.26	2.49	6.9f/	3.35	1.89f/	4.69	5.6f/
Secondary	2.77	4.00	5.00	2.62	3.85	3.0g/	5.25	3.50	1.21	1.38	3.9g/	-	0.25	3.44	3.8g/
University	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: a/ Centro de Estudios de Población y Familia: "Condicionamientos Socioculturales de la Fecundidad en Bolivia, CEP, 1967-1969 page 93, table 2.44. The reference is to single persons.

b/ Merlo, Pedro: Ecuador: Análisis de una Encuesta de Fecundidad Urbana y Rural realizada en el año 1967-1968, Santiago, Chile, CELADE, Series C, N° 133 (1971), table 10. The reference is to married women or living in free union.

c/ Fucaraccio, Angel, Algunos efectos del desarrollo sobre la población, CELADE, (mimeographed), 1973, table 5 with data from PECFAL-Rural. The reference is to married women.

d/ Miró, Carmen and Mertens, Walter: Influencia de algunas variables intermedias en el nivel y en las diferencias de fecundidad urbana y rural en América Latina, Santiago, Chile, CELADE, Series A, N° 92 (1969), table 7. The reference is to women who at some time have been pregnant.

e/ National Office of Statistics and Censuses. National Institute of Planning: "La Población del Perú" (1974), Table 3. The reference is to mothers.

f/ Complete primary education: not specified in the other cases.

g/ Secondary education: not specified in the other cases.

/In rural

In rural areas of the Continent, as elsewhere, there are couples who do not practise any type of contraception even when the wife is motivated to control her fertility so as to have fewer children, and even although both spouses are aware of the existence of contraceptive methods accessible to them. Empirical research on the factors which could explain this gap between theory and practise have concluded that the most important factor is the communication between husband and wife: the older the wife is, the more probability there is that the knowledge acquired will be put into practice.44/ In turn the degree of communication is determined by how the role of each spouse it defined in the type of family to which they belong and by the educational status of each.

Consequently, education plays a central role in determining fertility since it affects the age of marriage, the family size considered ideal, the knowledge of contraceptives and to what extent this knowledge is put into practice. Research has also shown that relatively low levels of formal education in rural areas are sufficient to reduce fertility considerably.

It should, however, be recalled that there are factors inherent in the various forms of organization of agricultural production and rural social structure which affect the extent to which the population of these areas have access to educational services and use them adequately. The settlements furthest removed from the urban nuclei have in general less possibilities of access to formal education. On the other hand, school attendance is conditioned by the need of the parents for their children to collaborate in the family's productive labour, so that families whose position in the structure provides a weaker motivation for limiting births are those which have the least opportunity of sending their children to school. Family and educational types are thus structurally conditioned and mutually strengthened.

44/ Simmons, Alan and Culagowski, Mauricio, Motivación acerca del tamaño de la familia y toma de decisiones de la pareja: un examen de sus reacciones con la brecha conocimiento - práctica de anticonceptivos en América Latina rural, CELADE, September 1974.

/In brief,

In brief, although there is much research to be done before definite conclusions can be reached, the available data clearly suggest that the lines followed by the development of agriculture and the more heterogenous structure which they have created, are not only a direct or indirect consequence of population growth and the new patterns of geographical distribution among the population, but that they also strongly influence the factors which determine the growth of the rural population. If the interpretation outlined here is correct, the increased fertility and mortality rates are occurring precisely in those rural areas where the pressure on the land is strongest. The possibility of infant mortality declining in such areas with the slow spread of health services, without any change in the structural conditions which condition reproductive performance and determine employment opportunities in the rural population, leads it to be feared that demographic pressure will be aggravated in these areas, and force even larger numbers of peasants and agricultural workers to migrate.

D. Rural social heterogeneity and migrations

The changes which have taken place in the structure of society as a result of the form which agricultural development has taken make up the structural framework which permit the spread of the major population displacements within the rural areas, and from here to the towns.

A distinction will be made here between seasonal migrations, permanent rural-rural migrations and rural-urban migrations.

1. Seasonal migrations

The seasonal migrations of unemployed or underemployed agricultural labour would appear to be an essential part of the mode of development which has come to predominate in the region, since it allows the farms to cut down on their permanent labour without running the risk of finding themselves short during those periods of the year in which they require increased labour. Besides, they provide a source of

/additional income

additional income for the considerable number of underemployed workers which up to a point acts as a check on direct rural-urban migration.

2. Permanent rural-rural migrations

In addition to the above, the heterogeneity of the structure of agriculture is causing permanent migrations, both among rural areas and from rural to urban areas. Among the former a distinction should be made between those which go to the agricultural frontier area, the permanent international migrations between rural areas of bordering countries, and those from plantations and haciendas to small hamlets and peasant villages.

A large part of rural-rural migration is made up of minifundium workers, driven either spontaneously or as part of a government policy to colonize areas of the agricultural frontier, by the extreme lengths to which land division goes, as a result of the predominant ownership and tenancy relationships and the natural growth of the population. The colonization of waste and wooded land in the tropical areas of Mexico, the migration of Central American peasants to the damp lands of the Atlantic coast, the emigration of indigenous peasants towards the eastern plains of Bolivia, the colonization of the Brazilian Amazon, etc., has to a large extent been caused by the migration of peasants. They may set out, reproducing the subsistence economy from which they come in their places of destination, and later become permanent or temporary employees in the plantations, haciendas and estancias which have appeared in these areas because of land value, or on the contrary, they may start out as agricultural workers in order to obtain small grants of land later.

In addition to the above type of migration there is also that of peasants and agricultural workers towards border countries, already referred to in a previous section of the present document.

The third type of rural-rural migration is made up of the labour displaced from the commercial farms - owing to the increase in agricultural mechanization - which finds itself obliged to abandon its former places of residence and settle in the form of small hamlets

/along the

along the highways. Migration of this type, when they acquire a certain volume, contribute to the reclassification of places of destination, from rural to urban.

3. Permanent rural-urban migrations

There can be no doubt that rural-urban migration merits special attention both because of its volume and because of the accumulative effect which it has on the process of urban concentration and its attendant economic, political and social effects.

It is not possible to determine with absolute accuracy the exact size of rural-urban migrations in Latin America, since generally speaking the country censuses do not contain data which permits a direct estimate to be made. The estimates are thus based on indirect calculations which compare the expected population in rural areas where there is no migration with the population actually registered at the end of a specific period in those areas. The difference between the former and the latter is attributed to migration.

Using this indirect method and on the basis of the theory that without migration the rural population of the continent would have increased between 1950 and 1960 in the same proportions as the total population, it has been determined that 14.6 million persons migrated from rural to urban areas during this period between censuses; this is practically half of what their natural growth would have been (estimated on the basis of the above theory at 30 million). A migration of this size may have contributed slightly over 40 per cent of the increases in the urban population observed during this period.45/

Generally speaking, it would seem that the volume of rural emigration has been increasing instead of declining in recent decades. If the figures for the whole of Latin America during the inter-censal period 1940-1950 are examined and the process used for the analysis of

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45/ Luois J. Ducoff, The role of migration in the demographic development of Latin America, Document presented at the conference for the sixtieth anniversary of the Milbank Memorial Fund, New York city, from 5-7 April 1965.

/the period

the period immediately following it applied, the conclusion must be reached that in the 1940s the rural population was able to keep back a larger share of its natural growth than during the 1950s (63 per cent compared with 51 per cent).46/

Until the results of the censuses made around 1970 are published it will not be possible to judge whether this increasing trend in rural emigration continued during the decade which has just ended. However, some studies of a fairly exploratory nature, made in Mexico and Chile,47/ 48/ suggest that it has not decreased.

Despite the size of rural emigration, the studies made in some metropolitan areas of Latin America have emphasized the fact that direct migration from the country to these areas is rather the exception than the rule. The most frequent situation would appear to be a staggered migration towards the major cities, with a series of earlier movements to the place of destination, either within the rural areas, from these to small and medium urban nuclei, a return to rural areas followed by a final migration later, etc.

There is a tendency for the young men and women of a relatively higher educational level, who live in communities with easier access to the cities, either for reasons of distance or availability of means of communication, or because they are more a part of national society through educational, economic, political, religious and administrative services, to migrate towards the cities.

Three factors are contributing to form future trends in migration: the natural growth of the rural population, the gradual integration of the more outlying areas in national society, and a greater or lesser measure of regional balance in the country's development.

46/ Ducoff, op. cit.

47/ Pecht, Valdomiro, El proceso de transferencia de fuerza de trabajo del campo a la ciudad y algunos aspectos de la agricultura mexicana Santiago, Chile, CELADE, Serie D, Nº 74, 1972, page 64.

48/ Lira, Luis Felipe, Estructura Agraria y Población: Análisis del caso chileno, a document presented at the seminar on agrarian structure and population dynamics, organized by the Colegio de Mexico and PISPAL, Cuernavaca, 26 November 1974.

/If present

If present trends in agricultural development continue, it is extremely probably that job opportunities in agriculture will become even more limited. Subsistence in minifundium areas operationally integrated with capital-based farms and the reproduction of latifundium forms of ownership and labour in new agricultural areas, leads to the use of little labour, and to the fact that the limited division of labour implied in these forms of organizing production does not offer opportunities of social advance to a population which the increase in the level of education and the increased exposure to the mass communication media have brought to entertain new aspirations.

At the same time, although the greater complexity of the work in the most modern farms means that promotion possibilities are better and that the higher levels of remuneration allow a superior standard of living to that of other agricultural workers, they occupy a smaller proportion of the sector's labour. At the same time, their form of organizing production and the living patterns more similar to those of the urban centres which this imposes, causes the disassociation of persons working on these farms from peasant culture.

In brief, in rural Latin America, both the factors which cause displacement from the land and the factors of attraction to the cities combine in such a way that it is possible to forecast an increase in rural-urban migration in the future.

On the other hand, the concentration of industrial development in the major cities and the relative economic stagnation of the towns and smaller urban nuclei has meant that job opportunities are greater in the former than the latter although frequently in low productivity activities. If this trend in the overall development of the countries should continue, it may be expected that the migration from the smaller urban nuclei to the major cities will increase and that direct migration from the rural areas towards the cities will grow considerably.

V. INTRA-URBAN HETEROGENEITY AND POPULATION GROWTH

The extreme importance of the process of urbanization referred to earlier, both as a result of the general development process and because of the effect it has on bringing about new changes, gives rise to the need for ending this report with a brief analysis of the main characteristics inherent in the internal structure of cities.

Three main topics will be dealt with in this section. The first concerns the interrelationships between employment, social strata, and urban migration; the second topic conerns the negative consequences of urban expansion on the human environment in cities; and the third deals with the effects produced by urban structure on the variables which determine the natural growth of urban population.

A. Tendencies in the economically active population

The economically active population in urban areas (i.e., excluding agriculture and mining) increased by almost fourteen million persons between 1960 and 1970 (from 34,050,000 to 47,833,000) with an annual growth rate for the period of 3.4 per cent, which contrasts strongly with the negative growth rate for agriculture (-0.3), and with the modest increase of 1.5 per cent in the working population of the mining sector.49/

These unequal growth rates have meant that the active population employed in agriculture decreased from 47.8 per cent to 39.0 per cent in the region as a whole between 1960 and 1970, while in the manufacturing sector it increased from 12.9 per cent to 14.6 per cent and in the services sector from 14.6 per cent to 19.4 per cent over the same period.50/

The tendencies outlined above illustrate the pattern of each sector's contribution to the gross national product. In all

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49/ Calculated from data provided in: Inter-American Development Bank, Economic and Social Progress in Latin America, Annual Report 1973 (Washington, D.C.), Statistical Appendix, table 2.

50/ Ibid., table 4.

Latin America both agriculture and mining have steadily decreased their share of the gross national product. The share of the agricultural sector fell from 19.5 per cent in 1960 to 14.4 per cent in 1972, while that of the mining sector over the same period fell from 4.3 per cent to 2.8 per cent.51/

The proportion of female participation in the working population of Latin America is one of the lowest in the world, and showed only a slight tendency to increase between 1950 and 1970. Brazil is an exception in this respect, and Brazilian statistics show a steady and considerable increase in female participation.52/

In spite of their present low proportion, it is expected that more than ten million women will swell the ranks of the active population in Latin America before the end of the century.53/

Female participation in the economically active population is considerably higher in large cities than it is in smaller cities or in the nation as a whole. This fact has been considered at a national level as confirmation of the correlation said to exist between female employment and urbanization and industrialization,54/ a correlation which is not apparent if comparisons are made between one country and another.

In the active population, female participation differs from one social strata of employment to another. The heaviest concentration is in manual labour, but within this category female participation from one country to another varies in its incidence in the skilled and unskilled categories.55/

51/ Ibid., table 10.

52/ Juan Carlos Elizaga: "Participación de la mujer en la mano de obra en América Latina: la fecundidad y otros determinantes", in Revista Internacional del Trabajo, vol. 89, Nº 56, May-June 1974.

53/ ECLA, "Population and development in Latin America", vol. II.

54/ Ibid.

55/ Ibid., table 3.

/The degree

The degree of education attained by women determines, on the one hand, the level they will occupy in the social strata of employment, and, on the other, gives rise to differences in the proportion of the labour force they represent, with considerably higher proportion among women who have had a university education. In any event, the proportion is less in the case of married women and common-law wives than it is for single women, widows, or women with severed conjugal ties.

Finally, a certain qualitative shift in female participation has been apparent over the years, from domestic services and home-based industries towards manual labour of greater productivity.56/

1. Tendencies in urban employment

An analysis of the variations in urban rates of visible unemployment between 1960 and 1970 shows that these rates fell in Argentina, Bolivia, Colombia, Chile and Venezuela. No comparative data are available for other countries.57/

Furthermore, in three countries for which data are available (Argentina, Colombia and Chile), visible unemployment in the last decade was greater in other cities than in the capital.58/

The foregoing facts reveal a greater capacity than is commonly supposed on the part of urban areas in general, and of capital cities in particular, to be able to absorb increases in labour force which are produced as a result of both rural-urban migration and of vegetative growth of the urban population.

The situation takes on a slightly different aspect when the generating sources of urban employment are examined.

56/ Juan Carlos Elizaga: "Participación de la mujer ...", op.cit., pp. 579-585.

57/ Henry Kirsch, "Employment and the utilization of human resources in Latin America", Economic Bulletin for Latin America, vol. XVIII, Nº 1 and 2, 1973, (calculations made by ECLA based on official statistics and national sources).

58/ Ibid.

/The first

The first result of such an examination shows that, in spite of the fact that manufacturing is the only activity which has shown a relatively steady increase in its contribution to the gross national product (from 22.1 per cent in 1960 to 26.5 per cent in 1972), the share of the secondary sector in absorbing labour increased only from 23.5 per cent to 26.2 per cent in the past decade in all those countries for which figures are available.59/ On the other hand, the tertiary sector's share increased from 29.8 per cent in 1960 to 34.6 per cent in 1970.60/

In the secondary sector, there is evidence that it is not the more modern or technologically advanced enterprises which generate more employment, but artisan-type and small industries, which contribute little to the general production and productivity of the sector.

The increase in employment in the tertiary sector is partly due to a real increase in the demand for productive services as a result of the relative development of the urban economy, but it appears to be mainly a spurious case of absorption of labour. There are in fact three main types of services which generate employment: those dependent upon the State, which generally have a low productivity; domestic services, and occasional services, with a very low productivity.

From the above facts, two conclusions can be drawn. First, that the absorption of new sources or urban manpower has been achieved through an increase in the marginal employment of wage-earners and in the underemployment of own-account workers. Secondly, the extreme heterogeneity of the urban labour market has given rise to an underemployment market parallel to the organized labour market which is difficult to delineate but is generally considered to include own-account unskilled workers, workers engaged in domestic services, and firms which employ less than five persons.61/

59/ The secondary sector comprises, for these purposes, mining and quarrying, manufacturing, construction, and basic services. In the case of Brazil it was not possible to break down the information any further, and for this reason the whole sector is presented thus.

60/ Henry Kirsch, op.cit.

61/ PREALC-OIT, Políticas de empleo en América Latina, Santiago, September 1974.

2. Tendencies in the social strata of employment in urban areas

The foregoing must be supplemented by some tentative conclusions concerning the changes which have taken place in the social strata of urban employment:62/

(a) The lower social levels have increased considerably only in Venezuela, and have remained stable in other countries. However, there have been important qualitative changes within these levels. First of all, in the lower social levels of the secondary sector there has been a shift from own-account artisan-type work to wage-paying work, although the absolute size of the former has not decreased. Secondly, in the tertiary sector the number of own-account workers is smaller than that of wage-earners employed by the State in services, or than that employed in domestic services.

(b) On the other hand, the last decades has seen a considerable increase in upper and middle urban social levels in all the countries under consideration here. This fact, together with the stability of the size of the lower urban levels, reveals the presence of a relatively strong upward social movement in Latin American urban areas.

(c) The so-called marginal urban groups merit special mention. It is worth distinguishing between marginal employment and marginal environment. Marginal employment refers to the kind of casual labour of extremely low productivity which provides a correspondingly low and variable remuneration for those engaged in it. By marginal environment is meant an unstable and deprived community removed from the general urban structure.

The two terms do not necessarily coincide, as there are cases of marginal employment being carried out by individuals and groups who do not belong to a marginal environment; similarly, there are persons whose environment is marginal and who are engaged in non-marginal employment.

62/ Information obtained from census and household surveys carried out in Chile, Uruguay, Brazil, Venezuela, Costa Rica and Ecuador. See ECLA, Economic Survey of Latin America 1973, Part Three, "Social change in Latin America in the early 1970s".

/The process

The process of urban concentration and the "urbanization" of the economy have apparently led to aggravation as far as marginal environment is concerned, but at the same time they have brought about a slight check on marginal employment, at least in relative terms.

3. The incorporation of migrants in the system of social strata of urban employment

At the present time, available statistics do not permit a distinction to be made between the incorporation of rural migrants in the social classification of employment at their destinations, and those who migrate from other urban centres. For this reason, migrants in general will be the subject of this section.

It is worth remembering that migrants constitute a heterogeneous addition as far as education, working experience, and employment skills are concerned, and that their status is relatively higher than that of their place of origin, but generally lower than that of the native urban population.63/

As can be seen in table 6, based on census samples of 1970 available in CELADE's "Programa Omuece", the migrant working population tends to be heavily represented in the lower social levels of employment (domestic servants and unskilled workers) both in the capital and in other urban areas (and, in Argentina, in the rest of the country). However, although migrants are at a certain disadvantage compared with the native urban population, they are also strongly represented in the middle social levels of administrative workers, skilled workers, and to a lesser extent among upper level administrative official.64/

63/ Simmons and Cardona, op.cit.

64/ These results have been confirmed by further research based on sample surveys. See, for example, Humberto Muñoz and Orlandina de Oliveira: "Migración interna y movilidad en la ciudad de México" in CLACSO, Migración y Desarrollo, Buenos Aires, vol. II, pp. 83-97, 1973; Dagmar Raczynski: "Migration, mobility, and occupational achievement: the case of Santiago, Chile", International Migration Review; Dagmar Raczynski: "Urbanización, migración y oportunidades ocupacionales en Chile", Revista Latinoamericana de Estudios Urbano-Regionales, vol. IV, (September 1974), Nº 10, pp. 23-29.

/Table 6

Table 6

SOCIAL STRATA OF EMPLOYMENT OF PERSONS ACCORDING TO THEIR MIGRATORY STATUS[a/] AND PLACE OF RESIDENCE, FOR FOUR SELECTED COUNTRIES IN LATIN AMERICA, 1970

Social classification of employment	Panama				Paraguay				Nicaragua				Argentina			
	Capital		Other urban centres		Capital		Other urban centres		Capital		Other urban centres		Capital		Other urban centres	
	Mi grants	Non mi grants	Mi grants	Non mi grants	Mi grants	Non mi grants	Mi grants	Non mi grants	Mi grants	Non mi grants	Mi grants	Non mi grants	Mi grants	Non mi grants	Mi grants	Non mi grants
1. Urban entrepreneurs, medium and large-scale	0.8	1.4	0.5	1.1	1.5	3.0	1.0	1.2	0.5	0.7	0.7	0.6	3.0	6.9	1.6	2.5
2. Administrative high-level officials, (dependent)	13.1	12.6	15.0	10.5	4.9	8.3	7.4	5.8	10.9	8.3	12.0	6.1	10.3	15.8	7.5	8.7
3. Professionals, technicians, etc. (independent)	1.0	0.5	2.0	0.3	0.5	2.0	1.2	0.8	1.3	0.9	1.8	0.9	1.5	3.0	1.0	0.9
4. Self-employed, medium level (independent)	1.1	3.2	2.2	4.5	2.9	6.1	6.0	7.3	4.6	8.2	6.0	8.0	2.9	7.4	2.8	5.2
5. Administrative officials, medium level (dependent)	22.6	30.7	18.6	22.2	13.7	11.8	13.9	8.3	15.8	19.3	14.0	10.9	23.7	28.0	12.6	14.5
6. Skilled workers (dependent)	16.3	22.9	21.7	24.3	13.0	19.7	19.8	19.7	16.8	24.5	18.6	19.5	22.4	17.2	29.0	21.8
7. Unskilled workers (dependent)	3.4	4.0	6.0	6.1	3.6	3.4	3.8	3.3	2.0	3.4	4.2	2.3	4.5	3.4	7.0	6.2
8. Domestic service	23.7	8.4	11.4	8.4	27.0	9.9	10.2	6.3	32.3	12.4	11.2	9.9	21.1	4.6	8.8	4.9
9. Manual workers (independent)	4.1	6.5	5.6	8.3	8.6	14.8	13.3	17.2	6.7	10.1	7.7	11.8	3.4	5.6	4.2	6.0
- Employed in agriculture, hunting and fishing (all social levels)	2.3	1.6	9.4	7.6	2.7	2.0	11.2	21.8	1.9	1.3	12.8	19.0	0.2	0.5	9.6	17.4
- Seeking employment for the first time	5.0	5.4	4.7	4.9	1.6	1.8	1.3	1.5	1.0	1.5	1.4	1.7	0.6	0.3	0.8	0.8
- Unclassifiable or undeclared employment	5.8	1.6	1.3	0.7	18.9	5.3	8.7	4.5	3.1	5.3	4.6	3.6	4.3	4.2	12.4	7.1
Total b/	99.2	98.8	98.9	98.9	98.9	88.1	97.8	97.7	96.9	95.9	95.0	94.3	97.9	96.9	97.3	96.0

Source: CELADE tables, "Programa CHUECE", 1970.

a/ The status of "migrant" is accorded to persons who have 5 years' residence or less in a given urban area.

b/ At all social levels, "non-remunerated relatives" are not included.

/The figures

The figures given in table 6 are obviously affected by the different skills with which migrants are equipped when they take up employment in their chosen destinations. For this reason the figures should be supplemented by a summary of what is known concerning the possibilities open to migrants of improving their social and occupational levels in their new places or residence.

Even though such information is fragmentary, and sometimes contradictory, it indicates that the pessimism concerning migrants' possibilities of social improvement should be treated with caution. According to the results of research carried out by Muñoz, Oliveira, and Raczynski,65/ the following hypotheses can be stated:

(a) In capital cities, the only migrants at a disadvantage are those proceeding from rural and semi-rural areas who, as we have seen, are a minority in the total number of migrants and have previously been employed in agriculture.

(b) A migrant's first urban employment will affect his subsequent opportunities: when this is unskilled or semi-skilled, the migrant is at a disadvantage compared with the urban native as far as social improvement is concerned. On the other hand, if his first employment is skilled or non-manual, the advantage lies with the migrant.

(c) In medium-sized towns migrants from other urban areas tend to have better opportunities than the locals; only rural migrants are not in this advantageous position.

Finally, although it is true that massive migration is drastically affecting the sectoral structural of the economically active population, causing problems of unemployment and underemployment in cities, and changing the pattern of urban social structure, these changes do not appear to be having an effect solely on the migrant population itself, nor to be as sweeping as had previously been supposed.66/

65/ See footnote 64.

66/ This is also evident when we consider how quickly a migrant finds employment in cities. See, in this connexion, Joan M. Nelson: "Migrants, urban poverty and instability in developing nations", Centers for International Affairs, Harvard University, 1969.

B. Urban expansion and deterioration of the human environment in Latin America

Deterioration of the human environment has been described as a disfunctional situation existing between the inhabitants of a city and their habitat, which tends to impede the normal and proper fulfillment of their needs, thereby adversely affecting the state of both their physical and mental health.67/

However, the process of urbanization has been carried out in Latin America at the cost of serious deterioration in the environment and in the living conditions of vast sectors of the urban population.

This deterioration has many facets, the most important of which will be dealt with here.

Slums: The departure of the wealthier classes from the area immediately surrounding the commercial centre of the city where they previously lived (a typical characteristic of urban transformation due to changes in activity) brings with it deterioration of the central area and its conversion into areas of slum-type dwellings. In old residences rooms are let for whole families to live in, but this new use of the property is not accompanied by any increase in the sanitary services or other facilities (such as kitchens, sinks, places for leaving washing to dry, etc.). According to the surveys, these old houses serve as living quarters mainly for recent arrivals in the city, who subsequently admit other migrant friends and relatives. Their proximity to centres of employment provides migrants with opportunities of finding work more easily or of saving time and money when travelling to work. Overcrowding, lack of hygiene, physical deterioration, and general unpleasantness are typical of these zones, which are traditionally the most densely populated parts of urban centres.

The living conditions in the slum areas are so deplorably miserable that residents of marginal districts (which are recognized as areas of very precarious living conditions), who have previously

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67/ José Henríquez and Sebastian Riedel: "Proceso de metropolización y deterioro urbano" DEPUR-ODEPLAN. Seminar: Proceso de Metropolización en Chile y América Latina. Santiago, 1972, p. 9.

/lived in

lived in slums, consider their present living conditions an improvement. Surveys in the marginal districts of "El Carmen", "El Gavilán" and others on the out-skirts of Bogota show percentages as high as 73 per cent supporting this opinion.

Exaggerated expansion of the city: The departure from the centre of the wealthy classes and the establishment of ghettos, bring about conditions which subsequently lead to the exaggerated expansion of the suburbs of the city. The privileged classes move to outlying districts where they settle on large plots of land, thus forming areas of low-density population. Then follows the infrastructure to facilitate the transport of these residents to the centre of the city, which continues to be the focal point of the country's (or the region's) economy, thereby encouraging even more the expansion of these districts. Such expansion brings in its train further costly public utilities for the supply of water, drainage, electricity, roads, all of which require heavy investment.

In their turn, after a certain period of urban experience, the poorer immigrants come under pressure from high rents, insecurity of accomodation, lack of physical space, etc., and find a solution to their problems by "invading" the suburbs. At first, these extremely shabby settlements grow at an alarming rate, spontaneously, by a simple process of addition, although in most countries different forms of organization later develop in these settlements. The spatial structure of the city in this way becomes a reflection of the socio-economic structure.

As a result of the two phenomena described above, cities have expanded at an exaggerated rate, and some of them have doubled their area within a period of ten years or so.

This kind of disorderly expansion of Latin American cities has often resulted in a drop in the overall population density of the city in spite of a sharp increase in the total population.

The role of the marginal settlements already referred to is obviously a major one in the physical expansion of cities. In Bogota, "incomplete and illegal urbanization" accounted in 1970 for approximately 1,530 hectares, while in Guayaquil, with a population

/about one

about one third the size of Bogota, it accounts for 800 hectares with about 1,540 urban blocks. In the small town of Neiva in Colombia, a fifth of the total area is taken up by marginal settlements.

When industrial development began, factories were sited almost haphazardly, without proper planning, generally on the cut-skirts of the city near interurban roads or railways. This policy of location has hardly undergone any change with the passing of time.

In its constant expansion, the city has surrounded these factories with new residential districts which are today victims of the atmospheric pollution produced within the districts themselves. Industrial growth, increases in the circulation of motor vehicles and in the consumption of different fuels, all affect the level of pollution. Other city dwellers are not free from this kind of pollution once the smoke from chimneys, exhaust fumes from motor vehicles, and unpleasant odours start spreading in the environment.

Studies carried out by the Panamerican Sampling Network of the Panamerican Health Organization have shown that major cities in Latin America are already beginning to suffer the serious effects of atmospheric pollution. Of the 14 cities for which continuous measurement is available, at least five appear to have an already seriously polluted atmosphere, while another five regularly register levels of pollution.

The general situation described here is not very reassuring. The majority of these problems have been shown to be nothing but abnormal social phenomena at national and multinational levels, and that the degree of concentration existing in cities makes such phenomena more noticeable. Urban problems are sometimes conjugated with optimistic concepts such as greater access to culture, the possibility of eventually obtaining better employment, and of migrants' acquiring a deeper knowledge and understanding of political affairs. It is not intended to discuss such considerations here. The fact is that governments are becoming increasingly aware of the need to face the problems referred to, since events tend to suggest that the growth of Latin American cities is a process which is likely to continue for many more years.

/C. Urban

C. Urban social heterogeneity and differential fertility

The future trends of vegetative growth of the urban population are subject to the pattern of major changes occurring in Latin American countries, and particularly to those taking place in the social-class system and in the standard of living in the various urban groups. This is evidenced by an analysis of the fertility rates among the different social classes of employment and of education.

A majority of the surveys carried out in urban areas of Latin America have discovered a negative correlation between the social level of the husband's employment and fertility rates. Families where the husband is engaged in manual labour generally show a higher rate of fertility than families where the head is engaged in non-manual work. Moreover, information collected by CELADE's programme of comparative surveys on urban fertility in Latin America (PECFAL-Urbano), has brought to light other interesting facts. The first of these is that in all the cities where the surveys were carried out, except for Buenos Aires, the families with higher fertility rates are those which belong to the lowest social levels of manual employment; this includes the masses of families in which the father is engaged in poorly-defined categories of employment, mostly in the trading sector and in services. The fertility rates in these families are considerably higher than those in which the father is an industrial worker or is engaged in a more stable type of manual labour.

A second finding which is worth pointing out is that, appart from the exceptions already noted, the difference in fertility rates between the lowest social category of non-manual employment and the highest category of manual employment is less than the difference in fertility rates existing between the two social categories of manual employment appearing in the survey (see table 7).

/Table 7

Table 7

NUMBER OF CHILDREN PER MARRIED WOMAN AT THE END OF HER FERTILE LIFE (45-49 YEAR OF AGE), CLASSIFIED ACCORDING TO THE HUSBAND'S OCCUPATION, FOR THE CITIES SHOWN, 1963-1964

Husband's occupation	Buenos Aires	Río de Janeiro	Bogotá	San José	México	Caracas
Professionals	3.0	3.0	3.2	3.6	3.5	2.4
Managers and Directors	1.6	2.9	4.0	2.9	3.9	3.5
Supervisors, upper echelons	1.5	1.9	2.7	3.3	4.4	3.6
Supervisors, lower echelons	1.9	3.3	5.4	4.6	5.5	3.3
Manual workers	2.0	3.3	5.3	5.0	5.1	5.0
Semi-manual workers and others	3.2	4.5	5.8	6.5	6.3	5.4
Total	2.1	3.2	4.9	5.2	5.0	4.4

Source: CELADE, programme of comperative surveys on fertility in Latin America, Urban Zone, Group 4 Tables (135x14x28).

/Similar findings

Similar findings occur upon examination of the differences in fertility rate according to standards of education.68/ No other socio-economic variable shows such a sharply negative correlation with a mother's fertility than her level of education. (At the same time, in all categories of female education the fertility rate falls as the husband's level of education increases.) The dividing line in the great majority of Latin American countries is between those women who have completed their primary education and those with lower levels of formal education (see table 8).

There are clear signs that the differences in fertility according to the employment and education of the father or of the parents are affected by certain types of families. The presence of these families has caused attention to be drawn to the unequal access of individuals to goods and services, as well as to the different values, standards, motivations, and attitudes which are linked to the diversity of forms of productive organization existing in cities. Unfortunately, research into this important field is only just beginning, which makes it impossible for any results to appear in this report.

Unlike the case of industrialized countries, the relationship between social mobility and fertility has been the subject of very little research in Latin America. The small amount of information which is available, however, conforms with the hypothesis that married couples in a higher social position than that of their parents have fewer children than couples who have not experienced social mobility in an upwards direction.69/

68/ On this topic, see Walter Mertens: "Investigación sobre la fecundidad y la planificación familiar en América Latina", Conferencia Regional Latinoamericana de Población, Mexico, 1970, Minutes (1), pp. 193-219.

69/ Bertram Hutchinson: "Fertility, social mobility, and urban migration in Brazil", Population Studies, XIV, Nº 3, 1961, pp. 182-189; María Helena Henríques: La movilidad social y la fecundidad en Río de Janeiro, CELADE, Series C, Nº 112, 1968; Ruth Sautli: in Boletín de Investigaciones, Institute of Sociology, University of Buenos Aires, 1963, quoted in ECLA, Población y Desarrollo, p. 227, note 11.

/Table 8

Table 8

LATIN AMERICA: AVERAGE NUMBER OF LIVE BIRTHS CLASSIFIED ACCORDING TO WOMEN'S LEVEL OF EDUCATION, IN SELECTED CITIES, 1960

Level of education	Large urban areas						
	Buenos Aires	Río de Janeiro	Panamá	Caracas	San José	Bogotá	México
Without education	3.14	4.68	3.44	4.56	5.09	5.01	4.72
With incomplete primary education	2.10	3.02	3.68	4.08	4.96	4.28	4.94
Complete primary education	1.72	2.80	3.53	3.15	3.76	3.86	4.03
With incomplete secondary education	1.76	2.20	3.08	2.73	2.93	3.56	3.56
Complete secondary education	1.48	2.09	2.64	2.59	2.38	3.18	3.56
With incomplete university education	1.91	2.17	2.44	2.56	2.76	3.18	3.03
Total	1.49	2.25	2.74	2.97	2.98	3.16	3.27

Source: C. Miro and W. Mertens: Influencia de algunas variables intermedias en el nivel y en las diferenciales de fecundidad urbana y rural de América Latina, CELADE, Series A, N° 92, 1969.

/On the

On the other hand, even though the reasons for the phenomena are not clear, it has been shown that women who work have a lower fertility rate than those who do not.70/

Finally, the correlation between the migratory status of the mother, or of the couple, and the fertility rate, is an item which provides little scope for specific conclusions. In the seven cities subject to the comparative survey of urban fertility organized by CELADE, it was found that women born in rural areas or in villages had a higher average number of children than other women. The same conclusion was reached independently by Germani in Buenos Aires 71/ and by Zárate in Mexico.72/ However, in Santiago de Chile,73/ Buenos Aires,74/ the Caribbean and Puerto Rico,75/ no such differences were found, or native urban women were shown to be more fertile than migrant women.

70/ Ana María Rothman: La participación femenina en actividades económicas en su relación con el nivel de fecundidad en Buenos Aires y México, CELADE, Series C, Nº 108, 1969; Paula Hollerbach Hass: Maternal employment and fertility in metropolitan Latin America, Duke University, 1971; Henry Kirsch, op.cit.; J.C. Elizaga: "Participación de la mujer ...", op.cit.; ECLA, "Population and development in Latin America", op.cit., table 7.

71/ Gino Germani: "Investigación sobre los efectos sociales de la urbanización en un área obrera del Gran Buenos Aires", Philip M. Hauser: La urbanización en América Latina, UNESCO, 1962, pp. 208-235.

72/ Alvan O. Zárate: "Differential fertility in Mexico: Prelude to transition", Milbank Memorial Fund Quarterly, vol. XLV, Nº 2, April 1967, pp. 93-108.

73/ Juan C. Elizaga: Migraciones a las áreas, op.cit.; Leon Tabah and Raúl Samuel: Resultados preliminares de una encuesta de fecundidad y de actitudes relativas a la formación de la familia, en Santiago de Chile, CELADE, Series A, Nº 26, 1961.

74/ Zulma L. Recchini: La fecundidad en la ciudad de Buenos Aires desde fines del siglo pasado hasta 1936, Santiago, CELADE, 1963.

75/ For a summary of these, see Walter Mertens: "Investigación sobre la fecundidad y la planificación familiar en América Latina", in the Minutes of the Conferencia Regional Latinoamericana de Población, op.cit., pp. 193-235.

/The contradictions

The contradictions appearing in these results may be due to not having made a more careful distinction among types of migrants according to their places of origin, their age on arrival at their destination, the amount of time they have been living in the city, their occupations, education, etc. When these variables have been checked, it has been found that migrants who spent the years of their "social formation" in rural communities and migrated to cities after the age of fifteen are more fertile than the urban natives, but this is not the case with other migrants.76/ However, the results of further research are needed before final conclusions can be reached in this matter.

D. Urban social heterogeneity and differential mortality

The small amount of research into urban mortality and socio-economic levels in Latin America invariably shows that both general and infant mortality rates increase as the scale of social stratification is descended.

The most recent data are from Honduras and from Nicaragua. In Honduras, a national demographic survey was carried out in 1970 and 1971. Its findings showed a general mortality rate in the upper social levels which was less than half the rate registered in the lower social groups (see table 9).

Table 9

HONDURAS: MORTALITY RATES ACCORDING TO SOCIAL CLASS, 1971-1972

Social level	Mortality rate (per thousand)
Upper and Upper Middle	6.63
Middle	9.79
Lower Middle	14.84
Lower	16.10

Source: National Demographic Survey of Honduras (EDNH), 1971-1972.

76/ Alvan Zárate: "Migración y Fecundidad en Monterrey, México", in Minutes of the Regional Conference ..., pp. 347-354.

The 1971 census in Nicaragua showed similar findings: although the total urban mortality rate is lower than the rural rate, in the case of mothers without formal education it is higher than in rural areas, and two and a half times higher than the mortality rate for mothers with ten or more years' education.

Research carried out by the Panamerican Health Organization in ten Latin American cities 77/ and by De Kadt in Chile 78/ confirm the negative correlation between education of the mother and infant mortality.

Moreover, a pioneer research project into infant mortality and standards of living carried out in the 1950s in Chile, 79/ showed that the mortality rate among the children of manual workers was double that among the children of non-manual workers, with greater differences occurring in post neonatal mortality (because of greater susceptibility to the socio-economic environment) than in neonatal mortality.

The differential access to medical services is a factor which helps to account for the differences in infant mortality rates among the different social levels of employment and education. Although the inhabitants of cities have more and better medical attention than those in rural areas, the marginal environment of vast sectors of the urban population allows them fewer opportunities of access to services than those who do not live in marginal areas. This accounts for the fact that even in cities with an acceptable ratio of doctors to inhabitants, a large percentage of children die without any medical attention. 80/

Lack of financial resources to cover cases of illness is an obvious obstacle to medical attention. In situations where free

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77/ See footnote 25.

78/ Emanuel De Kadt: "La distribución de la salud en Chile", in Alejandro Foxley et al: Distribución del ingreso y desarrollo, Mexico, Fondo de Cultura Económica, 1974.

79/ Hugo Behm: Mortalidad infantil y nivel de vida, Santiago, University of Chile, 1962.

80/ John Bryant: Health and the developing world, Ithaca and London, Cornell University Press, 1969.

/attention in

attention in health services is dependent upon stable employment and membership of a system of social security, the marginally employed (referred to earlier) with their unstable jobs which are not covered by the benefits of social security are at a clear disadvantage, not only in comparison with non-manual workers but also with manual workers not engaged in marginal employment.

However, it is worth remembering that even when medical attention is provided, infant mortality is still higher among the lower social levels; this demonstrates the relationship between infant mortality and general living conditions. Problems of housing, drainage, drinking water, waste disposal, etc. in this way become an even more important focus of action than the extension of health services in the fight against infant mortality among the more socially deprived urban classes.

VI. CONCLUSIONS

As the Introduction suggested, and as shown throughout this document, there are many gaps in the knowledge of interrelationships between development and population. Filling these gaps, with the aim of providing governments with a basis for action, will have to be a high priority for national and international organizations whose task it is to examine these matters.

In spite of the gaps, a synthesis of the results of demographic studies and of the research of other social sciences into aspects relating to the integration of the population in development plans and policies does allow some general conclusions to be advanced.

In the first place, there is an evident diversity of demographic situations both among the countries of Latin America as well as within the countries themselves. Some countries are experiencing a low vegetative growth in population and several are tending towards this situation; many other countries are undergoing a period of accelerated demographic growth and a few are reaching the early stages of this process.

Within the countries themselves, three divergencies have been brought to light concerning fertility and mortality: the rates existing in different regions of the country, the different rates between the urban and the rural populations, and the rates separating the social classes and strata within these regions and areas.

It has also been discovered that all Latin American countries are facing problems deriving from a massive and rapid process of urbanization and urban concentration. However, here too three different kinds of situation are present, depending upon the moment urbanization begins, the increasing or decreasing trend towards concentration, and the degree of supremacy of the capital city.

Secondly, the information gathered in this document reveals the inseparability of the demographic phenomenon as such from the economic and socio-cultural aspects of development. Of these, the standard of living of the population, the quality of the environment and the access

/people have

people have to education and health services appear to be particularly important in relation to the fertility and mortality rates of the population.

However, possibly the socio-economic factor that most affects the growth and distribution tendencies of the population is the opportunity for employment afforded in different regions and areas for members of different social groups. In fact, unemployment and underemployment among the rural areas in Latin America not only affect the standard of living, and therefore the fertility and mortality rates in those areas, but are also the main reason behind the massive rural-urban migration perceived in Latin American countries. On the other hand, the inequality of opportunities of employment and social improvement provided by urban centres of different sizes or by those located in different regions is the cause of urban-urban migration and of the subsequent process of urban concentration and urbanization.

In larger cities, unemployment and marginal employment appear to be directly related to high rates of fertility and mortality. Finally, international migration of both unskilled and highly skilled workers is largely due to the opportunities for, and to the problems of, employment.

The above considerations point to the fact that bringing about changes in the tendencies of growth and of spatial distribution of the population implies at the same time dealing with some of the basic problems of development in Latin American countries:

1. Because of the impact it has on demographic growth, and because of its importance as the cause of the huge process of spatial redistribution now taking place in Latin America, the type of agricultural development prevailing in these countries - and in regions within these countries - needs to be reappraised. So too, do the different agricultural policy measures which may be proposed, in the light of the effects they may have upon factors which determine demographic behaviour.

From the information presented here, it seems likely that, if a reduction in rural-urban migration is desired, it will be necessary to

/examine very

examine very carefully the possibility of combining a modernization of agriculture, tending to increase food production, with an increase in the capacity to absorb manpower in agriculture. At this moment there are cases of increase in agricultural production and productivity which have been brought about by the intensive use of manpower, of fertilizers, and of hybrid seeds, thus invalidating the claims that massive and indiscriminate mechanization are inevitable for producing these results.

However, the advantages and disadvantages of mechanizing agriculture, as well as the ideal ratio of capital to labour, are not problems which can be considered in abstract, but must be dealt with separately in each national or regional context. The most important point to be stressed here is that discussion of these problems should take fully into account the demographic characteristics of the nation or of the region, the desired effects to be produced on rural-urban migration, and the effects which might be foreseen as a consequence of the choice between one alternative and another.

Policies which tend to stimulate the formation of local industries for processing agricultural produce, with the aim of attracting more of the rural population to these areas, also appear, from what has been said of migration in this report, to be measures capable of reducing rural emigration to a certain extent, and of partially checking urban concentration.

Adoption of the policies suggested in the preceding paragraphs, if successful in improving the income and living conditions of the rural population, will also be establishing conditions for an eventual decrease in mortality rates and a possible change in the reproductive patterns of parents. However, such policies need to be complemented by measures tending to provide the rural population - and especially the population of remote areas - with access to education, medical attention, and to other basic services.

In short, improvement in the growth trends and distribution of rural population which prevail in the majority of Latin American countries presupposes, as recommended in the World Plan of Action,

/"carrying out

"carrying out intensive programmes of economic and social improvement in rural areas by means of balanced agricultural development which would provide higher income levels, allow effective expansion of social services, and include measures for the protection of the environment and for the conservation and expansion of agricultural resources".

2. Profound changes in present demographic tendencies presuppose further, that measures designed to employ the rural population more fully and to improve their standard of living be integrated into policies aiming at a more balanced regional development within Latin American countries.

This report has mentioned several times that the patterns of population distribution follow closely - although not always exactly - the spatial distribution of productive resources, which is strongly influenced by the historical characteristics of development in the region. Furthermore, present decisions concerning the location of these resources are in turn influenced by the advantages obtained from pre-existing concentration in certain urban centres and other areas of productive activities, population, physical infrastructure and basic services, miscellaneous and skilled manpower, a consumer market and, in general, external economies.

It is generally agreed that market forces tend to accentuate the pattern of concentrated distribution of population. Migration, inter-regional trade and movement of capital are all processes which testify to the rise of richer regions and to the decline of poorer ones, with the gap between them widening. There is a vicious circle which intensifies the trends towards concentration of activities and of population, and which intensifies affluence and poverty on a regional scale.

It is essential to break this circle by taking a series of measures designed to achieve a more balanced regional development; for example, policies relating to location of industries, investment, distribution of services, administrative decentralization, etc. Judging by the knowledge which is at present available, such policies would be appropriate for bringing about significant changes in the

distribution trends of mortality rates, for reducing mortality in general, and for achieving a better balance in these rates among the different regions and social strata. At the same time, it is highly probable that a more balanced regional development will create the conditions for a reduction of the fertility rates in the regions which are at present deprived because of the existing trends towards concentrated development.

3. The main part of this report referred to the consequences for urban centres, and particularly for capital cities, of the dominant trends of the development process and the demographic growth generated by these trends. The execution of policies designed to bring about a more balanced rural and regional development, insofar as they manage to reduce or redirect migratory movements, points the way for dealing with some of the causes of urban concentration and metropolization.

However, even supposing that these policies achieve their aims, it is highly probable that the process of urbanization will continue in the future in the majority of Latin American countries. This makes it necessary to adopt measures which at least prevent the continued aggravation of problems of urban unemployment and underemployment with their consequent low standards of living and deterioration of the environment. The most important of these measures are undoubtedly those designed to open up new employment opportunities in cities. Parallel to these, other measures will have to be adopted which will allow for improvement in the environment of the poorer social classes; this can be achieved by policies for the construction of popular housing, for the development of infrastructure, and for providing these classes with access to health services, education, transport, recreation, etc. At the same time, it appears that the moment has come to try to put a stop, as far as possible, to disorderly and improvised urban expansion and to the ever-increasing breakdown of the spatial-functional structure of major cities.

It is obvious that measures of the type referred to above do not need to be justified by the demographic consequences they may

produce. However, it is worth recalling that empirical research has drawn attention to the major importance if attempts are to be made to reduce mortality rates among the poorer urban strata. Moreover, these measures appear to be a necessary condition for creating a family environment in which parents may exercise the fundamental human right to determine freely and responsibly the planning of their families.

4. The amount of international migration, the effect it has on the countries between which it takes place and the social, political and cultural problems which it is causing, make them priority areas for action, especially in countries which have adopted policies designed to encourage migration, or where migration has become a significant factor. The first step would seem to be to try to obtain more information, both quantitative and qualitative, concerning the characteristics of migrants. Their age, sex, family situation, level of education, amount of training and rates of employment are, among others, important factors for the adoption of policies on the part of the home country as well as on the part of the host country.

Particularly in the case of migration of unskilled labour, home and host countries should jointly examine migrants' conditions and take measures to protect migrants against discrimination in the labour market or other forms of discrimination arising from prejudice or from cultural clashes.

On the other hand, it seems important to ascertain more precisely the relative importance of economic factors, the degree of interest and satisfaction in employment, professional working conditions, and promotion prospects, etc. in the migration of trained personnel.

With regard to these people, it is also necessary to judge the success of import concessions, housing loans, contract facilities, and other material offers made to returning migrants, as well as to study possible alternatives.

Finally, for Latin American countries, and particularly for the smaller countries, the need has arisen to take collective measures to promote regional or sub-regional integration, with the aim of achieving more efficient training and use of qualified human resources.

/Such integration

Such integration would make the training of certain types of professionals more feasible, particularly at post-graduate level. This would avoid expensive studies abroad, from which not all students return, would stimulate research, and would widen the scope of labour markets.

Throughout this document, which is an attempt to outline the relationships between the characteristics of development in Latin American countries and demographic trends, it has become clear, in spite of the present state of incomplete knowledge of the subject, that these trends occur in (and help to determine) a particular structural context characteristic of each individual country.

From a practical point of view this implies that, whether intended or not, social and economic policies will, to a greater or lesser extent, directly or indirectly, alter these demographic trends. But it also implies that, apart from their specific aims, some government measures may be used consciously to achieve certain demographic aims.

The decision as to what these aims shall be, or the decision not to determine these aims, and the choice of appropriate measures to achieve them, are part of the sovereign rights of each nation. The four areas previously mentioned are merely strategic points of reference for economic and social development policies and for certain demographic objectives.

Progress in research into the relationships between development and the particular situation of the population of each country, the setting up of pilot plans designed to test the type of policy outlined here, their subsequent assessment and the exchange of experiences among the governments of the region will undoubtedly permit the establishment and future expansion of plans of action, for which those governments who wish to do so may deliberately and simultaneously propose economic, social and demographic objetives.

/STATISTICAL ANNEX

STATISTICAL ANNEX

Table 1

LATIN AMERICA: LEVEL OF URBANIZATION AND PERCENTAGE DIFFERENCE AND INCREASE, BY GROUP OF COUNTRIES, 1950-1970

Group 1 Country	Percentage of the total population in cities with more than 20 000 inhabitants (level of urbanization)			Percentage difference in level of urbanization for the period 1950-1970	Percentage increase in level of urbanization for the period 1950-1970
	1950	1960	1970		
Argentina	51.7	57.5	64.8	13.1	25.5
Uruguay	45.5	56.5	70.1	24.6	54.0
Chile	38.7	50.0	54.6	15.9	41.0
Cuba	35.4	41.5	47.5	12.1	34.2
Group total	45.8	53.0	60.0	14.2	31.0

Source: ECLA and CELADE estimates, Boletín Demográfico Nº 10, 1972.

Table 2

LATIN AMERICA: LEVEL OF URBANIZATION AND PERCENTAGE DIFFERENCE AND INCREASE, BY GROUP OF COUNTRIES, 1950-1970

Group 2 Country	Percentage of the total population in cities with more than 20 000 inhabitants (level of urbanization)			Percentage difference in level of urbanization for the period 1950-1970	Percentage increase in level of urbanization for the period 1950-1970
	1950	1960	1970		
Venezuela	30.9	42.4	55.7	24.8	80.0
Mexico	24.9	32.3	40.5	15.6	61.8
Panama	23.5	34.9	38.8	15.3	65.1
Costa Rica	21.2	22.3	32.3	11.1	50.0
Colombia	21.0	30.0	43.0	22.0	104.7
Brazil	20.9	29.0	39.3	18.4	88.0
Group total	22.5	31.0	41.0	18.5	84.0

Source: ECLA and CELADE estimates, Boletín Demográfico Nº 10, 1972.

Table 3

LATIN AMERICA: LEVEL OF URBANIZATION AND PERCENTAGE DIFFERENCE AND INCREASE, BY GROUP OF COUNTRIES, 1950-1970

Group 3 Country	Percentage of the total population in cities with more than 20 000 inhabitants (level of urbanization)			Percentage difference in level of urbanization for the period 1950-1970	Percentage increase in level of urbanization for the period 1950-1970
	1950	1960	1970		
Bolivia	19.7	20.5	23.3	3.6	10.8
Peru	18.2	26.0	32.5	14.3	78.5
Ecuador	17.7	25.5	32.9	15.2	85.8
Paraguay	15.5	16.6	20.9	5.4	34.8
Nicaragua	14.2	18.8	24.6	10.4	73.2
El Salvador	12.5	17.0	18.4	5.9	47.1
Dominican Rep.	10.3	18.2	27.6	17.3	167.9
Guatemala	10.3	13.2	17.7	7.4	72.8
Honduras	6.8	11.0	15.4	8.6	126.4
Haiti	4.7	6.0	6.9	2.2	46.7
Group total	14.0	18.5	24.3	10.3	73.6

Source: ECLA and CELADE estimates, Boletín Demográfico N° 10, 1972.

Table 4

LATIN AMERICA: SUMMARY OF URBANIZATION AND OF URBAN GROWTH, BY GROUP OF COUNTRIES, 1960-1970

Country	Annual average growth rate			Level of urbanization: Urban population as a percentage of total population		Percentage of demographic growth absorbed by cities		Rate of urbanization a/
	Total population	Urban population	Rural population	1960	1970	1960	1970	
Group I	1.8	3.0	0.2	53.0	59.7	94.2		1.2
Group II	3.1	6.1	1.5	30.8	41.0	69.4		2.9
Group III	3.0	5.5	2.3	19.0	24.3	39.4		2.4
Total	2.9	5.2	1.5	32.8	41.4	66.5		2.2

Source: ECLA and CELADE estimates taken from CELADE, Boletín Demográfico Nº 10, 1972, and from ECLA, Population, and Development, Vol. I, 1974.

a/ "Rate of urbanization" is taken as meaning the rate of increase in the proportion of the total population living in centres with 20 000 or more inhabitants.

Table 5

LATIN AMERICA: (TWENTY COUNTRIES) NUMBER OF CITIES AND DISTRIBUTION OF THE URBAN POPULATION ACCORDING TO SIZE OF CITY, 1950-1970

Size of city	Number of cities			Urban population (in thousands)			Percentage of urban population in each category			Percentage of total population in each category		
	1950	1960	1970	1950	1960	1970	1950	1960	1970	1950	1960	1970
1 million or over	7	11	16	16 353	29 789	51 759	40.7	43.9	45.8	10.4	14.4	18.8
500 000 - 1 million	5	8	17	3 336	5 385	11 598	8.3	7.9	10.3	2.1	2.6	4.2
100 000 - 500 000	49	73	115	10 432	15 651	22 416	26.0	23.1	19.8	6.6	7.6	8.2
50 000 - 100 000	58	105	169	3 922	7 133	11 756	9.8	10.5	10.4	2.5	3.4	4.3
20 000 - 50 000	201	319	511	6 143	9 888	15 432	15.3	14.6	13.7	3.9	4.8	5.6
Total	320	516	828	40 187	67 845	112 961	100.0	100.0	100.0	25.6	32.8	41.1

Source: ECLA and CELADE estimates, Boletín Demográfico Nº. 10, 1972.

Table 6

LATIN AMERICA: PERCENTAGES OF TOTAL AND URBAN POPULATION ACCORDING TO NUMBER AND SIZE OF CITIES, BY GROUP OF COUNTRIES, 1960-1970

	In cities of 20 000 or over (urban)				In cities of 100 000 or over						In cities of 500 000 or over						In cities of 1 million or over					
					Of the total population		Of the urban population a/				Of the total population		Of the urban population b/				Of the total population		Of the urban population c/			
	1960	Number	1970	Number	1960	1970	1960	Number	1970	Number	1960	1970	1960	Number	1970	Number	1960	1970	1960	Number	1970	Number
Group 1	53.0	127	59.7	188	42.4	46.2	79.1	21	77.3	25	33.4	37.0	63.1	6	61.8	7	30.1	32.3	56.8	4	54.0	4
Group 2	30.8	321	41.0	543	22.5	31.1	73.2	59	75.9	103	15.7	22.5	51.0	12	54.9	20	12.6	19.1	40.9	6	46.5	11
Group 3	19.0	68	24.3	97	13.2	17.9	69.1	12	73.5	19	4.6	12.4	24.1	1	50.9	1	4.6	5.7	24.1	1	23.4	1
Total	32.8	516	41.1	828	24.6	31.2	74.9	92	75.9	148	17.0	23.0	51.8	19	56.1	33	14.4	18.8	43.9	11	45.8	16

Source: CELADE, Boletín Demográfico Nº. 10, 1972 and ECLA estimates in "Population and Development", Vol. I, 1974.

a/ Urban concentration index: percentage of the urban population living in cities with over 100 000 inhabitants.

b/ Large city concentration index: percentage of the urban population living in cities with over 500 000 inhabitants.

c/ Megalopolis concentration index: percentage of the urban population living in cities with over 1 million inhabitants.

Table 7

LATIN AMERICA: URBAN - RURAL GROWTH RATE AND PERCENTAGE DIFFERENCE, BY GROUP OF COUNTRIES, 1960-1970

Country	Annual growth rate (1960-1970) of:			Percentage difference between rural rate and total population rate	Percentage difference between urban rate and total population rate
	Total population	Urban population	Rural population		
Group 1	1.8	3.0	0.2	1.6	1.2
Group 2	3.1	6.1	1.5	1.6	3.0
Group 3	3.0	5.5	2.3	0.7	2.5
Total	2.9	5.2	1.5	1.4	2.3

Source: See table 4.

Table 8

NET NUMBER OF INTERNAL MIGRANTS IN HOST PROVINCES AND PROVINCES OF ORIGIN IN SIX LATIN AMERICAN COUNTRIES, 1960-1970

Argentina 1960-1970				Brasil 1960-1970			
Host province	Nº of Immigrants	Province of origin	Nº of emigrants	Host province	Nº of immigrants	Province of origin	Nº of emigrants
Buenos Aires	862 839	Capital Federal	-122 008	Rondonia	8 759	Acre	-11 780
Córdoba	27 304	Catamarca	-34 199	Amapá	7 071	Amazonas	-50 221
Chubut	5 833	Corrientes	-90 034	Río de Janeiro	286 672	Roraima	-1 171
Neuquen	8 042	Chalo	-120 746	Guanabara	415 042	Pará	-3 063
Río Negro	11 722	Entre Ríos	-127 098	Sao Paulo	1 336 652	Maranhão	-310 835
Santa Cruz y Tierra del Fuego		Formosa	-10 100	Paraná	679 125	Piauí	-70 012
		Jujuy	-13 294	Matto Grosso	218 549	Ceará	-153 129
		La Pampa	-11 938	Goiás	151 969	Río Grande do Norte	-17 249
		La Rioja	-23 099	Distrito Federal	228 728	Paraíba	-229 972
		Mendoza	-14 760			Pernambuco	-261 197
		Misiones	-35 459			Alagoas	-106 568
		Salta	-30 480			Sergipe	-96 358
		San Juan	-38 803			Bahía	-508 916
		San Luis	-23 451			Minas Gerais	-1 178 939
		Santa Fé	-8 437			Espírito Santo	-209 599
		Santiago del Estero	-88 635			Santa Catarina	-14 686
		Tucumán	-142 019			Río Grande do Sul	-110 504
Total	934 968	Total	-934 290	Total	3 332 567	Total	-3 334 199

Table 8 (continued)

Colombia 1950-1960				Chile 1960-1970			
Host province	N° of immigrants	Province of origin	N° of emigrants	Host province	N° of immigrants	Province of origin	N° of emigrants
Antioquia	299 845	Bolívar	-15 324	Tarapacá	24 129	Antofagasta	-5 625
Atlántico	41 901	Boyacá	-67 572	Atacama	5 414	Coquimbo	-41 318
Bogotá D.E.	302 150	Caldas	-69 082	Valparaíso	34 568	Aconcagua	-5 295
Córdoba	19 080	Cauca	-29 281	Santiago	327 057	O'Higgins	-7 588
Magdalena	54 451	Cundinamarca	-118 340	Magallanes	7 248	Colchagua	-24 346
Meta	22 682	Chocó	-14 085			Curicó	-11 879
Valle del Cauca	65 917	Huila	-14 899			Maule	-13 034
Intend. de Caquetá	11 080	Nariño	-43 978			Linares	-24 036
		Norte de Santander	-30 632			Talca	-19 217
		Santander	-57 062			Ñuble	-25 584
		Tolima	-109 233			Concepción	-21 962
						Arauco	-11 742
						Bío-Bío	-16 738
						Malleco	-33 451
						Cautín	-54 326
						Valdivia	-42 680
						Osorno	-13 205
						Llanquihue	-11 012
						Chiloé	-9 345
						Aysén	-535
Total	547 106	Total	-577 257	Total	398 416	Total	-394 868

Table 8 (concluded)

Mexico 1960-1970				Venezuela 1960-1970			
Host province	N° of immigrants	Province of origin	N° of emigrants	Host province	N° of immigrants	Province of origin	N° of emigrants
Baja Calif. Norte	101 479	Aguas Calientes	-3 117	Dist. Federal	133 595	Anzoátegui	-36 641
Baja Calif. Sur	9 705	Coahuila	-93 910	Aragua	58 933	Apure	-11 525
Campeche	15 429	Chiapas	-99 909	Barinas	9 575	Cojedes	-8 653
Colima	8 248	Chihuahua	-66 778	Bolívar	39 707	Falcón	-53 299
Dist. Federal	354 840	Durango	-101 401	Carabobo	72 251	Guárico	-26 988
México	755 079	Guanajuato	-128 643	Miranda	121 113	Lara	-23 453
Morelos	58 888	Guerrero	59 470	Zulia	6 049	Mérida	-36 652
Nuevo León	158 331	Hidalgo	-135 251	Amazonas	1 623	Monagas	-44 479
Sinaloa	59 239	Jalisco	-84 115			Nueva Esparta	-3 957
Sonora	15 420	Michoacán	-203 191			Portuguesa	-5 277
Tabasco	31 060	Nayarit	-2 622			Sucre	-81 270
Tamaulipas	35 013	Oaxaca	-140 453			Táchira	-44 112
Veracruz	31 896	Puebla	-140 830			Trujillo	-54 977
		Queretaro	-13 562			Yaracuy	-20 793
		Quintana Roo	-10 417			Delta Amacuro	-3 035
		San Luis Potosí	-130 311				
		Tlaxcala	-43 724				
		Yucatán	-35 684				
		Zacatecas	-165 486				
Total	1 634 627	Total	-1 638 876	Total	442 846	Total	-445 111

Source: Jorge Arévalo: Migración Intercensal de seis países de América Latina, CELADE, Serie A, N°. 127, November 1974.

Table 9

RURAL POPULATION AND ECONOMICALLY ACTIVE POPULATION ENGAGED IN AGRICULTURE IN 20 LATIN AMERICAN COUNTRIES: 1950-1960-1970

Country	Rural population 1950		Economically active population 1950[a]		Rural population 1960		Rural population 1970		Economically active population 1960[b]	
	Thousands	Percentage	Thousands	Percentage	Thousands	Percentage	Thousands	Percentage	Thousands	Percentage
Argentina	8 251	48.3			8 863	42.5	8 576	35.2	1 360	18.1
Bolivia	2 420	80.3	958	70.4	2 937	79.5	3 572	76.7		
Brazil	41 372	79.1	10 145	58.5	49 914	71.0	56 558	60.7	11 882	52.5
Colombia	9 191	79.0	1 995	53.1	11 117	70.0	12 640	57.0	2 427	47.3
Costa Rica	669	78.8	148	54.4	971	77.7	1 176	67.7	187	47.2
Cuba	3 566	64.6	808	41.0	3 991	58.5	4 379	52.5		
Chile	3 716	61.3	608	28.2	3 841	50.0	4 414	45.4	657	27.5
Ecuador	2 655	82.3	616	51.1	3 220	74.5	4 042	67.1	800	55.5
El Salvador	1 682	87.5	409	62.6	2 086	83.0	2 806	81.6	486	60.2
Guatemala	2 712	89.7	652	67.4	3 441	86.8	4 345	82.3	849[g]	64.5[g]
Haiti	3 221	95.3	1 461	83.6	3 888	94.0	4 867	93.1		
Honduras	1 295	93.2	537	83.0	1 646	89.0	2 186	84.6	374	65.8
Mexico	20 002	75.1	4 812	57.7	24 400	67.7	30 153	59.5	6 065	53.5
Nicaragua	972	85.8	223	67.6	1 218	81.2	1 523	75.4	279	58.6
Panama	585	76.5	131	49.2	665	65.1	860	61.2	152	45.2
Paraguay	1 130	84.5	233	53.3	1 451	83.4	1 913	79.1	320	54.6
Peru	6 520	81.8			7 415	74.0	9 168	67.5	1 535	49.1
Dominican Republic	2 065	89.7			2 560	81.8	3 146	72.4	505	61.5
Uruguay	1 195	54.5			1 106	43.5	863	29.9	178	17.6
Venezuela	3 685	69.1	621	36.4	4 459	57.6	4 766	44.3	761	32.4

Source: i) Rural population 1950, 1960 and 1970: United Nations, "Population and Development in Latin America" Vol. 1, p. 111.

ii) Economically active population, 1950 and 1960: "America in Figures, 1970", Social situation, Tables 408.04 and 408.05, pp. 128-147.

a/ Around 1950.
b/ Around 1960.
g/ Corresponding to 1964.

Table 10

VISIBLE UNEMPLOYMENT BY COUNTRY IN URBAN AND RURAL AREAS, 1960-1970

(Thousands)

Country	1960						1970					
	Total		Urban area		Rural area		Total		Urban area		Rural area	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Argentina	778	9.4a/	-	-	-	-	514	5.6	-	4.8b/	-	-
Bolivia	461c/	20.3	-	-	-	-	229d/	10.7	-	15.0	-	-
Brazil	-	-	-	-	-	-	1 094	3.5	-	3.8	-	0.4
Colombia	484	10.1	-	-	-	-	459	7.5	353	10.0	106	3.9
Chile	160	6.7	-	-	-	-	162	6.2	143	7.2	19	3.1
Ecuador	62	4.5	-	-	-	-	97	5.1	-	-	-	-
Peru	84e/	2.6e/	-	1.1e/	-	0.3e/g/	201	4.7	-	2.9f/	-	0.3g/
Venezuela	309	13.1e/	278	17.1	31	4.3e/	194	6.0	159	6.7	35	4.2
Panama	38	11.2	-	-	-	-	47	9.7	-	-	-	-
Mexico	182	1.6	-	-	-	-	485	3.8	-	-	-	-

Source: ECLA, based on official figures and national sources.

a/ Corresponds to 1963.
b/ In 9 principal cities.
c/ Corresponds to 1967.
d/ 15 years of age or over.
e/ Corresponds to 1961.
f/ Refers to non-agricultural unemployment.
g/ Refers to unemployment in agriculture.

Table 11

RATE OF SCHOOL ENROLMENT OF 3 AGE GROUPS IN SELECTED COUNTRIES, AROUND 1960

Country	Urban	Rural	Rural as a percentage of urban	Urban	Rural	Rural as a percentage of urban	Urban	Rural	Rural as a percentage of urban
	7-14 years	7-14 years	7-14 years	15-19 years	15-19 years	15-19 years	20-24 years	20-24 years	20-24 years
Costa Rica	88.3	72.7	82	41.2	9.3	23	13.6	2.0	15
El Salvador	73.4	37.2	51	35.0	6.9	20	9.7	2.2	23
Guatemala	67.5	25.5	38	29.9	3.5	12	9.2	0.8	9
Honduras	73.6	39.2	53	29.9	5.9	20	6.6	0.5	8
Mexico	50.8	25.4	50	22.5	5.7	25	6.2	1.0	16
Panama	89.8	60.4	67	49.8	9.1	18	16.1	1.7	11
Dominican Republic	77.7	66.8	86	42.4	34.6	82	11.8	15.8	134
Colombia	67.1	40.0	60						
Chile	86.7	64.6	75	43.3	15.5	36	9.9	2.6	26
Peru	82.8	44.2	53	48.3	18.5	38	13.7	1.6	12

Source: Thomas Frejka: "Analysis of the Educational Situation in Latin America", Tables IV-4, IV-5 and IV-6, pages 59, 60 and 61.

Table 12

PERCENTAGE DISTRIBUTION AND AVERAGE NUMBER OF LIVE BIRTHS PER WOMAN, ACCORDING TO OCCUPATIONAL ACTIVITY

City	Unemployed women		Employed women		Total		Women employed outside their homes	
	Percentage	Average number of children	Percentage	Average number of children	Percentage	Average number of children	Percentage	Average number of children
Bogotá	60.9	3.68	39.1	2.36	100.0	3.16	19.4	2.12
Buenos Aires	61.8	1.78	38.2	1.01	100.0	1.49	29.7	0.84
Caracas	73.2	3.69	26.8	3.11	100.0	3.53	19.2	3.12
México	73.2	4.08	26.8	3.77	100.0	4.00	17.5	3.42
Panamá	61.9	3.07	38.1	2.26	100.0	2.76	30.5	1.38
San José	60.5	3.58	39.5	1.92	100.0	2.92	25.3	1.77
Río de Janeiro	69.3	2.46	30.7	1.81	100.0	2.26	17.6	1.44

Source: CELADE, PECFAL-U, group II tables, variables 25 x 12.

Table 13

NICARAGUA: INFANT MORTALITY IN 1970 FOR EVERY 1 000 LIVE BIRTHS, ACCORDING TO LEVEL OF EDUCATION OF THE MOTHER AND AREA OF REGISTRATION, 1971

Level of education of the mother	Area of registration		Total
	Urban	Rural	
0 Years	152	138	142
1 - 3	113	124	118
4 - 9	102	105	103
10 or more years	62	71	62
Total	118	133	127

Source: National Census of Nicaragua.